

La Salida del Sol

The Grupo Fenix Newsletter

December, 2009

Hello Friends of Grupo Fenix!

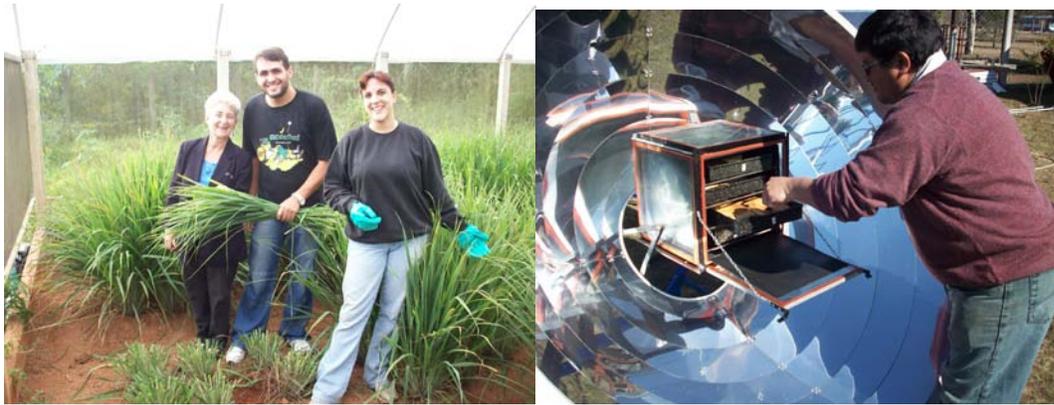
Another year of growth with all its challenges for Grupo Fenix, but this year has been one of the most dramatic for expansion and opportunities in all our history. Richard Komp continues his international solar empowerment work coming to us here in Nicaragua twice, as he also worked with six groups in the US and varied groups in Rwanda (twice, March and November), Pakistan, Canada, (twice, June and September) and Peru. (for full reports see www.mainesolar.org). The new part is that two of our Nicaraguan staff that have never left Central America traveled for intensive exchanges that spread Fenix and deepened their understanding of the importance of their work at home.

Nimia Perez, head of the Solar Production Workshop in Sabana Grande, recently traveled to Peru for a month-long technical exchange teaching with a group of local producers who supply medicinal plants to a natural medicine business, Whole World Botanicals. She trained local carpenters in the construction of three solar cookers and the women in the use of the cookers, terminating the workshop in a solar cooked meal including famous peruvian potatoes.



Right after completing her yearly phenomenal job of gathering a broad sector of Nicaraguan actors in the world of Renewable Energy together to participate in the Thirteenth Annual Renewable Energy and Sustainable Living Fair, Suyen Cordoba, Electrical Engineer and National Education Coordinator in Managua, spent one month in the University of Dayton, in their English program gaining understanding for being in a new country with a new language and the workings of the ETHOS program in it's home university.

I also got a chance to be away for two months in South America on a research “mini-sabbatical,” to return with renewed energy (solar and otherwise!) for the work of Grupo Fenix. In Brazil, I was immersed in a world of practical research at one of the world’s foremost emerging centers for agriculture and medicinal plants, following the activities of a doctoral student doing his thesis on Zacate Limon (Lemon Grass) at the [Universidade Federal de Viçosa](#). I spent the following month at Latin America’s oldest Solar Thermal Research Center, [INENCO](#), in Salta, Argentina. The result has been to add to the knowledge store that Grupo Fenix can draw on in fostering Nicaragua’s use of natural resources in ways that are socially, ecologically and economically sustainable.



In the meantime, our amazing staff members in Managua and at the Solar Center in Totogalpa have been working hard to make the best use of the SEED Initiative opportunity to launch the Solar Women of Totogalpa and the Solar Center into the future and to keep our other programs and projects running smoothly.

In July of 2008, Karen Molina assumed her new role of Administrative Assistant at the PFAE office in Managua. Karen is a 2002 graduate of the UNI in Systems Engineering and worked half-time for PFAE as information technical support for two and a half years before assuming this new role. She has faced the challenge with exemplary pro-activity. And she and Erika Gonzalez were able to begin their master’s programs to strengthen the program’s ability to manage project and to market our products and skills.

In Sabana Grande, Cody Reed, a former Solar Culture Course participant, was on contract for six months working with the Solar Women to best implement the Seed Initiative. Cody is an Earlham University, 2004 International Studies graduate who also worked with us for six months in 2005 as an organizational consultant. She is working with the Solar Women to help them develop into an independent organization that fosters the use of solar and other renewable energy applications in the community, and businesses based on these technologies, with the aim of bringing the dream of a model solar community and education center in Totogalpa to fruition.



Meanwhile, David Smith, who I introduced you to in our last newsletter – our Rural Research and Volunteer Coordinator – has brought new life and organization to the work of our international volunteers, the stuff of which he shares with all of you in his article to follow. David has not only inspired and organized our volunteers and better coordinated their work with community members, but has also stepped in to write grant proposals and guide the development of ACESOL, the solar panel workshop operating at the Solar Center, thus exceeding our wildest expectations! Bravo, David! He brings us up-to-date on volunteer projects at the Solar Center and progress in the development of more cost efficient solar panels, LED lighting systems, and solar cookers, among other R&D progress.

Bruno Georges, also introduced in our February newsletter, has stepped in as well to lead and assist in many ways other than his job description would have predicted. He attended a key SEED initiative meeting in New York, has worked with our volunteers to redesign and update the content of our website, and developed new relationships with universities. He has also, of course, been in charge of our Solar Culture and other course offerings, which have recently included collaborations with the Center for Environmental Learning and Living; Dayton and Cornell Universities; and our newest endeavor with the University of Sacramento (CA). Bruno tells all in his report, below.

Finally, Lori Hanna, the executive director of one of our newest partners, Salud del Sol, Inc., introduces this new organization and partnership with PFAE and the Solar Women of Totogalpa and its important work to help us develop a solar autoclave for use in rural health clinics. The work of Salud del Sol and its excellent staff, all of whom have spent time in the countryside with the Solar Women, was the feature article of Brass Magazine's August issue (<http://www.brassmagazine.com/>). Clearly, it is already making its mark!

Solar Center and PFAE staff together presented works of Grupo Fenix in the UNI's Technological Fair in September.



In October, I returned to the US after two years of absence, to Visit the Universities of Dayton, Davis and Sacramento, as well as family in Ohio and California respectively. In all three Universities we worked to set up the activities that best bring us closer to our joint missions and take maximum advantage of the collaboration between our tiny spot with a large vision and their large and dynamic institutions with similar visions.

The leadership and initiative of all of our staff members made it possible for me to take time out for research and to think about the future of PFAE and Grupo Fenix. We will be working in the weeks to come to sharpen that vision and we welcome your ideas and visits along the way!

Adelante con el sol,

Susan

Volunteer Update

by David Geoffrey Smith - "Hank"

There have been many exciting developments in the past year and volunteers from as far as Germany, Russia, France, England, the USA (including both "freak states" Alaska and Hawaii) and Canada have helped in a number of them.

In February the Centro Solar started work on its first demonstration wind mill. Bob and Mareike did the initial work on it setting up the frame, the wiring and a small generator. Meanwhile Ben Budding learned in Estelí how to rewind a car alternator to make it appropriate for use in the wind mill generating significantly more energy. Although the generator is now down for repair, we're hoping in the future to collaborate with the UNI to replace the generator with a home made Piggott design.

The restaurant, which is now scheduled to start construction before the end of the year was worked on in part by Andy French who gathered information on the basic original design and continued to work on it to meet the women's needs and desires. There was also a kiosk built in

front of Centro Solar by Mitch and the other Centro staff to give the women a chance to sell some snacks before the more complete restaurant opens up.

A past volunteer, CJ, was able to come back this year with his friend Nick for a visit and a lot of hard work where he donated everything from panels (on an install he led himself), to mattresses and mosquito nets to the green store. The Centro now has enough power to run computers, tools, and a projector for teaching all at the same time and still get through the day.

Work has continued on developing a small incorporated system that would provide a lower cost option for those that just want a little light. Both collaborating with Bright New Ideas and developing our own models, this work is set to continue into the new year.

As the women have continued to grow their ideas and dreams the volunteers have always been at their sides helping them by participating in administrative and planning work or just putting in time on the organic gardens they're developing. Maria from Greece, expanding on Steve and Gina's work last year, dedicated a lot of time to updating pricing information on our solar panel production which allowed us to drop our prices significantly while still tracking exactly how much money would be raised to further develop the cooperative.

Solar panels have a lot of problems with theft, but a recent volunteer, Esteban, has made it a lot harder. Thanks to his work we can now offer a 5 meter high, locking, welded iron frame to those that want it; while not making theft impossible, making it about 100 times harder.

With the current team of volunteers you should be on the look out for some great new developments such as more educational information posted around our site, expansion and better organisation of our rural electrification work, detailed maps of the community and surrounding trails and even a bike rental so that volunteers can explore more of the area and cut down on some of the long hauls we currently do.

Also keep an eye out for specific volunteer postings on the website which will help people match their skills and availability to upcoming projects.

Thanks to all the volunteers, many of which were not mentioned here, who have put in so much work to help the community here develop as a site for both action and education in sustainability.

Dave

Story of a year of international courses at Grupo Fenix

By Bruno Georges

International Education Coordinator

Since the last newsletter we have run quite a large number of courses with students from very diverse background and it was a pleasure to see how they all enjoyed the experience from the technical (solar) point of view but even more from the human side, for being able to understand local living conditions, to appreciate the friendliness of the people, the ability to exchange, some even with a minimum level of Spanish and from the comments we received we think it was for them a very enriching experience, as for instance Katherine from Dayton is summarizing it "I feel that being immersed in different lifestyles of Nicaraguans was a very valuable experience that I will treasure. Learning their way of life and simplicity was eye-opening yet relaxing ...

Also, working hands-on with the women building the solar cooker was fun and interesting due to the sign language we began to develop as our Spanish-speaking skills were lacking....”

Therefore I can take advantage of this newsletter to let you know some of the most prominent details of each courses.

But first of all I would like to share with you some pictures of our trip to New York. Quite impressive, after leaving Nicaragua to find himself in the middle of Manhattan, in the heart of the UNO and be able to visit the big conference room of the UNO meetings, meet the very nice SEED people and participate in meeting with the other 2008 SEED winners (you can see a list of the project for 2008 at <http://www.seedinit.org/award-winners/2008-winners-overview.html>).

It was quite exciting to exchange with the other prize winners their experience, understand how the prize has been used to foster an entrepreneurial movement in their project.

One major interest of this event for us was also to contact various representative of UNDP, NGO and universities for the future development of our initiative.



A particularly fruitful event was the 2009 SEED winner announcement where we could expose our products and explain to the visitors what Grupo Fenix is doing in Nicaragua. You can see below a very good memory of this event with all participants and Helen Macquard, Executive Director of the SEED initiative.



But now let's go back to our day to day life in Nicaragua...

The first course I had to manage was quite impressive since it runs for more than 2 weeks for the Center for Ecological Living and Learning (CELL, www.cellonline.org) and fits perfectly our objectives focusing on "Sustainability through Community for college students interested in being a part of the change toward environmental, community, and global sustainability". This longer time enables to build stronger relation with the students and also to sharer more knowledge and common interest, develop more the technical and practical parts and also participate with their teacher Meg in their sessions of reflection on the environmental and social issues of development, that I enjoyed personally very much because for instance of my previous experience in Fair Trade.



With the Cornell University session we could continue our work started the years before and between the community and the students we could engage into a study of the impact of solar cooker for the families and share experience, from both the theoretical and practical point of view on how to improve the design. This led to brainstorming sessions to improve the design of the cookers and put some ideas into practice to finally install it in the local primary school, and test it to cook our lunch.



With the University of Dayton it shows also the interest of having a long term relationship like the one with the Engineers in Technical Humanitarian Opportunities of Service Learning (ETHOS) with whom again we share common values: “ETHOS is founded on the belief that engineers are more apt and capable to serve our world more appropriately when they have experienced opportunities that increase their understanding of technology's global linkage with values, culture, society, politics, and economy” and the “appropriate technology social enterprise, Salud del Sol, Inc.” as describes Anna Young in an specific article below. And thanks to this close cooperation between Dayton and the UNI (Universidad Nacional de Ingeniería), we could organize, in addition to the week in Totoglapa, a very fruitful day of exchange of experience between the students of both engineering schools in their project of renewable energy, and innovation techniques.

With the University of Sacramento we had quite a new and exciting challenge and experience: receiving for the first time 20 art teachers through their Peregrine International Service Learning program “Exploring Science and the Environment through the Arts” and teach every morning to the local primary school of Sabana Grande. Deborah, who has been extraordinary organizing this group tells you more below about the impact in the community and the impressions this life experience left to the teachers.



And last but not least, we had this year with SEI a very challenging but rewarding experience. A little more than a month before running the course, Laurie informed us that she SEI was able to donate a Photovoltaic System of 4 panels of 220 Watts, to be installed during the course with the condition that it won't be for personal usage but rather for community usage.

Installing such a system means not only finding a place which needs it, which is easy, but also find an organization which is ready to ensure the social involvement in the usage and maintenance of the system. Too much equipment is installed by large organizations in the developing world without taking this important factor into consideration and which falls out of usage after a few years.

We investigated multiple places such as health centers, schools, etc... and finally opted for the community of “Palo de Agua” in the town of Ciudad Dario because this community, which lies 30 minutes by bus from the town, has no electricity, has a school of 2 classrooms (pre-scholars and primary), families who must send batteries to the town to have them charged and a well organized community group. Additionally the mayor of the town was willing to help us in the fast organization of this installation and the follow up of the system and in Ciudad Dario lives a previous member of Grupo Fenix, running an electrical business there, who could also ensure some follow-up. All the pieces seemed to be there to make this installation of school lighting and charging center a success.

To even ensure more chances of success of this installation, we involved heavily another member of Grupo Fenix (teaming is important), Suni Solar (<http://www.sunisolar.com>). With all that in place the group of students was able to install the system during the last 2 days of the course, the inauguration took place in presence of the representatives of the town of Ciudad Dario and of the UNI and the local villagers.



And now we can go on for the next year, with the following list of already scheduled courses (first half of 2010)....

- January 4 to 15 2010: Solar culture course
- February 15 to March 1: CELL
- March 20 to 28: Cornell University
- May 3 to 13: University of Dayton, ETHOS program
- May 23 to June 12: International Programs - University of Illinois at Urbana Champaign

We hope to see some of you at one of these events.

Bruno

“Salud del Sol” tells us about their partnership with Grupo Fenix
By Anna Young



From the brainstorming sessions with UNI research students to summer internships living with host families in the community, working with Grupo Fenix and the Solar Women of Totogalpa has had a profound impact on each of our lives here at [Salud del Sol, Inc.](#) We are continually motivated by these two organizations as we develop our own organization, progress research on the solar autoclave, and discern how to best accomplish our mission of developing appropriate technology for underserved areas.

Salud del Sol, Inc. (literally, “Health from the Sun”) began during my summer internship with Grupo Fenix in 2007. Susan Kinne introduced me to a research project initiated by Dr. Richard Komp—a solar autoclave—exploring the use of solar box cooker technology to sterilize medical instruments, for nurses in rural clinics without access to electricity have no means for on-site sterilization. Dr. Komp envisioned a pressure vessel that would sterilize medical instruments using only solar energy. I was (and still am!) inspired by this innovative approach to solar technology and the direct application to global health issues around the world. I adopted the solar autoclave as my honors thesis for my Mechanical Engineering degree at the University of Dayton (UD). With support from the UD School of Engineering, I continued the product research with a team of students in a senior design course. In addition, I recruited an interdisciplinary team of engineers and business students to enter the business plan competition at the University of Dayton. Our business model was based on co-developing and manufacturing the solar autoclave technology with Grupo Fenix and the Solar Women of Totogalpa. Our team received first place, and what was a student research project and a business plan competition became a reality!

Salud del Sol, Inc. is an appropriate technology social enterprise focused on collaborating with local organizations to expand the application of appropriate technology and renewable energy. Our partnership with Grupo Fenix and the Solar Women of Totogalpa provides a way to expand the solar autoclave and other similar health-related technologies such as solar box cookers and retained heat cookers. We conduct research and development, secure funding through donations and grants, perform market analysis and development, and provide other advice and assistance for long-term sustainability. The first venture of Salud del Sol involves the research,

development, testing, and implementation of the solar autoclave for the rural areas of Nicaragua with the Solar Women of Totogalpa. The results of this first venture will be a model for a local business that manufactures, markets, and distributes the solar autoclaves. Salud del Sol ensures that the technologies co-developed by researchers from the US, Grupo Fenix, and the Solar Women of Totogalpa will have a real impact on the local communities and improve the quality of healthcare in rural clinics in underserved areas.

We are absolutely delighted to be partnering with Grupo Fenix, the Solar Women of Totogalpa, and students and teachers at the National Engineering University in Managua. Our partnerships are constantly growing and evolving as Grupo Fenix expands research opportunities in renewable energy and the Solar Women gain official status as a cooperative. We look forward to future collaboration in developing appropriate technologies and enhance the capacity of local organizations to improve the quality of healthcare in underserved areas.

To learn more about our work in appropriate technology development and how you can become involved, please contact us at info@saluddelsol.org

Anna.

Twenty Sacramento teachers Visit Totogalpa primary school to Explore Science through the Arts.

By Deborah Bruns

Twenty visiting teachers and artists joined with the students and teachers at San Miguel Archangel School in Sabana Grande to pilot a new program “Exploring Science and the Environment through the Arts”.

The group came to the school to celebrate the work of the Solar Women of Totogalpa and use that work as a context for teaching and learning together. The visiting teachers had prepared lessons in science, visual arts and performing arts with the theme “Energy from the Sun”.

Science lessons included the water cycle powered by the sun, photosynthesis and food webs and experiments with temperature changes. During the visual arts lessons students built a 9-foot “Sol Brillante” puppet with recycled materials, created paintings and hand puppets representing the water cycle and made sun masks. The performing arts lessons included dance, rhythms and songs in Spanish and English.



The week began with the visiting teachers observing lessons presented by the local teachers to introduce the students to the theme for the week. This also gave the visiting teachers a chance to learn from the Nicaraguan teachers.

“People in Nicaragua are truly valiant in so many ways. That spirit was exemplified by the teachers at the school who work under very difficult circumstances, yet are so creative,” Lorie Hammond noted. Hammond is a professor in the teacher education program at Sacramento State University in California. Most of the group are enrolled in a graduate program in arts curriculum she co-coordinates.



That spirit was also evident throughout the week among the students.

“I was impressed by the way the kids got into the spirit of it all...they were amazingly respectful and good-natured,” said one of the participating teachers.

The week of lessons culminated in a Solar Fair during which students shared with families and the community what they had learned in the form of songs and performances along with displays of the art work and science lessons. Unfortunately, the real sun chose to hide behind the rain clouds that day, perhaps intimidated by Sol Brillante (see photo) so the celebration was moved to a classroom. As a special treat, the local Hijos del Sol dance troupe performed traditional dances and Dona Rumalda served her famous cacao cookies

We hope this will be the first of many trips that will support the students and teachers as they join with the Solar Women of Totogalpa to create a solar culture and model sustainable community. *If you are interested in joining a future trip to teach in the schools, please contact me at debbruns@sbcglobal.net.*

Deborah.