



**Inside this Edition:**

- **Alcoa Foundation Grant Helps Engineers Without Borders-International Improve Lives – four Success Stories**
- **EWB International Fund Raising by Steen Frederiksen**
- **Meet EWB Denmark**
- **Projects of other EWB MAs**
- **NEWS**
- **Donor's corner – Creation of a Global Engineer Program**
- **Photo competition**

**Alcoa Foundation Grant Helps Engineers Without Borders-International Improve Lives – Four Success Stories**

**Bridging high waters**

Rising waters during the rainy season is a challenge for many small villages in developing countries, often cutting off access to medical facilities, schools and markets for weeks at a time.

The Engineers Without Borders-USA Chapter at the Colorado School of Mines utilized Alcoa Foundation funding to help the communities of Los Gomez, Ochomogo, Cerreros, Los Prado, and Javillito, Nicaragua, build a pedestrian bridge across the Ochomogo River; the bridge was completed in March 2013. Alcoa Foundation's grant funded construction materials and travel expenses for students to work alongside community members, and to oversee the technical aspects of construction to ensure the safety and soundness of the bridge. Significant community involvement during each phase of the project helped ensure local ownership of the bridge and its long-term sustainability.



*Community celebration of completed bridge (Eric Rosing)*

Through an ongoing partnership with the community, the EWB-USA team will continue to monitor the sustainability of the bridge and provide guidance and support as needed.

**Ensuring consistent water supplies**

In the summer of 2012, the Arizona State University (ASU) chapter of EWB-USA installed a 78,000L capacity rainwater catchment tank at Bondo Training Teacher's College in Atillili, Kenya. The system collects rainwater off building roofs and pipes it into an in-ground tank. This allows the college to capture and use rainwater during the dry season.



*Construction is underway to install a concrete spillway on the local dam*

The following summer, the students installed a reinforced concrete spillway on a local surface dam to prevent erosional head cuts for the Atillili community, and the team continues to monitor both projects and make adjustments as needed.

The Alcoa Foundation grant funded project materials and supplies and allowed students to travel to Kenya and gain first-hand project experience.

"The Alcoa Foundation Grant has improved the education of and has helped create responsible leaders from the EWB-USA ASU engineers," said ASU team member Brittany Duong. In addition to ASU students, students at Bondo Training Teacher's College also assisted with the project and are now reaping the benefits of a reliable water supply.

**Turning on the lights**

The EWB chapter at Carnegie Mellon University utilized Alcoa Foundation funding to complete a solar energy project with Symbiosis Public School in Rampur, India.

Throughout 2011 the students designed the photovoltaic project and worked with a local Rampur contractor, Global Eco Power, to implement the design in 2012. The system is now meeting the needs of the school's 400 students and faculty members and has raised

awareness among the community of the possibilities of alternative energy. The team completed its first monitoring trip in August 2013 to confirm that the panels were working properly, and noted that there is still some work to be done. The team plans to continue to work with the school to maximize efficiency of the power output and to ensure the longevity of the system. The team also is working to teach the school's students about alternative energy and to inspire them to consider careers in science and engineering.



*A Carnegie Mellon team member teaches students at Symbiosis Public School about solar panels*

**Making improved sanitation a reality**

Sanitation. A convenience that much of the Western world takes for granted, is not available to many people in developing communities. To help improve sanitation in Las Pilitas, El Salvador, the EWB chapter at Ohio State University utilized Alcoa Foundation grant dollars to make significant improvements to the community's sanitation system. Modifications included raising some single pit latrines above ground and designing and installing a system that allows waste to be composted and reused as fertilizer.

The Alcoa Foundation grant funded the team's travel to El Salvador as well as supplies needed to retrofit the sanitation system. The student team has helped the community understand the benefits of properly maintained latrines on



reducing contaminants in the water supply and improving overall public health.

The Ohio State University EWB-USA team was not the only group funded by Alcoa Foundation to focus efforts on sanitation. In collaboration with EWB-Sierra Leone and the Baoma community, the Pennsylvania State chapter of EWB successfully

implemented a ventilated improved pit latrine for the residents of Baoma. They also have prototyped a

**EWB members from Ohio State University prepare for an educational meeting near the community's latrines**

point-of-use biosand filter in efforts to help improve the quality of the community's water supply.

"Through [their] generous support, [Alcoa Foundation] is not only supporting our education, but is also supporting the growth of the Baoma community," said Jill Morris, president of the Penn State chapter of EWB.

## EWB International Fund Raising



**Steen Frederiksen**  
EWB-I President

The EWB International Executive Committee (EC) decided last year that we had to collect a membership fee from the Member Associations able to pay. We decided that there should be a difference between developed country EWBs and developing country EWBs even though this may not directly reflect the ability to pay.

The background was that EWB in all its lifetime had been dependent on occasional funding from donors, starting by a large donation from Heinz and later donations from Alcoa. However, a regular income basis was never established and our ability of covering simple administrative expenses such as running a website, printing a newsletter or having an annual meeting of the EC or a General Assembly.

At present it looks like one third of the EWB Int. member associations will be able to pay the membership fee. It is of course fully acceptable that some Member associations are not able to pay the agreed fee, as many clearly struggle to obtain financing of their projects. We should jointly work to raise funds for our individual, national member associations as well as for our common EWB Int. platform.

Our basic conditions are the same. In order to attract funding we should follow the below principles:

- EWB must be known as nobody will support an organization they never heard of. This is a question of targeting promotion towards engineers as individuals and through them towards engineering companies, who will see supporting EWB as an important element in their Corporate Social responsibility programme.
- The element of volunteering must be highlighted because it demonstrates the substantial input to projects we are providing ourselves in addition to the external funding we need.
- Do not try to hide that your activities require an element of administrative costs and that this money has to come from the donation you receive for projects. Somewhere between 7 and 15 % is acceptable.
- We should be able to demonstrate a substantial membership support to demonstrate the popular – especially among engineers – backing we are having. Members should not only be students at technical universities, but certainly also graduate engineers and other professionals. Membership fees should be modest not to discourage people.
- Be sure that your projects are mentioned in technical papers and known in relevant engineering circles. Offer engineering companies to make presentations of your activities at after working hours social meetings.
- Finally, maintain an attractive website which is an efficient and low cost way of demonstrating your activities.

EWB International as well as all our national EWB Member Associations are in this respect in the same boat and will have to make the same efforts to raise funds. And if you are successful in your fund raising you will be able to pay the EWB Int. membership fee.

## Meet EWB Denmark

E-mail address of MA or of contact person:

[info@iug.dk](mailto:info@iug.dk)

Web site (if any):

[www.iug.dk](http://www.iug.dk)

Chairman:

**Steen Frederiksen** ([steen.frederiksen@ewb-international.org](mailto:steen.frederiksen@ewb-international.org))

Contact Person:

**Dorte Lindegaard Madsen** ([dorte@iug.dk](mailto:dorte@iug.dk))

Date founded:

**04<sup>th</sup> April 2001**

Office address:

**Skt. Annæ Plads 16, 1floor, DK-1250 Copenhagen K, Denmark**

Membership: (numbers)

**Personnel members >800**

**Student members 250**

**Corporate and institutional 10**

**No. of Student Chapters 4**

Member's fees (if any): **EUR 30.000 (2012)**

Donations, grants and the like: **EUR 304.000 (2012)**

Staffing (if any): **two part time salaried persons, the Secretariat Manager and a Project Coordinator supported by a team of 40 volunteers**

Key activities or program approach:

**EWB-DK works with other humanitarian organizations to provide life-saving assistance like access to safe drinking water, proper sanitation, and emergency shelter to people in disaster-affected areas, using our engineering and technological expertise. Moreover, they provide technological, humanitarian aid to projects that can assist in alleviating human suffering and fight poverty.**

**The main area of activity is water and sanitation projects. EWB DK has on-going WASH projects in Sierra Leone (in cooperation with EWB SL), Kenya, Tanzania and Gambia. In addition they are working on developing new projects in Togo and Uganda.**

**Another important area is building activities where they at present are active building medical clinics in Togo, home and school complex for orphans in India (in cooperation with EWB India), village schools and doctors clinic in Sierra Leone (in cooperation with EWB SL) and grain storage, cold rooms and micro silos in Kenya.**

**Finally their environmental focus comprises on-going irrigation projects in Kenya, waste management in Togo and community environmental planning in Bolivia. Furthermore the installation of green energy facilities in villages without power in Palestine continues in cooperation with EWB Palestine.**



**EWB Denmark presence in Denmark**



Signature: Red = completed - Green = present and future projects

**EWB Denmark presence abroad**

## Projects of other EWB MAs



Engineers Without Borders India

### Sanitation needs for Rudraram Village, AP India

Rudraram is a village in Medak District, Andhra Pradesh, India. It is surrounded by Industries and has a population of about 6000 from all faiths. Most of the villagers speak Telugu the local language, are poor and about 250 families are very poor and lack basic sanitation facilities. These families have to go far into the bushes to attend to Natures call. The area which is being used by the poor villagers has become unhygienic due to open defecation. It has also affected the environment badly. This area also attracts poisonous insects, reptiles and snakes. Attending during nights or when dark becomes extremely dangerous. Many have suffered and suffer skin infections due to the insects and there are also cases of death due to snake bites.

Gitam University, Hyderabad Campus is also situated in Rudraram and has about 3000 Students and Staff. To mitigate the suffering of the people in Rudraram Village, GITAM University EWB Chapter students intend to take up a Community Sanitation project in the village.

The project has been undertaken in two phases. Phase I was for installation of four toilets and learning from that experience and follow up with Phase II to install the balance 21 toilets.



*Cylindrical bio digester*

### Fulfilling household Lighting needs of Sirohi Village, Haryana, India

Sirohi is a village in Faridabad (Haryana), India with a population of approximately 3500 people and has 366 houses.

The inhabitants of this village are currently facing acute shortage of electricity in their community, which is not only hampering the quality of their lives but also forcing them to stay indoors after dark. Also, the smoke emission of kerosene lamps and inadequate light through wax candles contribute to environmental hazard and health risks, safety concerns, impact on children education, and economic deprivation.



*Solar Electrification Project at Sirohi*

The Solar Electrification Project at Sirohi is a collaborative initiative between Engineers Without Borders (India), Bechtel Corporation, Students at National Training and Power Institute and Skilled Samaritan Foundation. The project will be conducted in 3 phases over a period of 6 Months.

After techno-commercial evaluation of available options (Centralized vs. Standalone) through reputed vendors, it has been decided to install a standalone (individual) solar system manufactured by a reputed company in Indian market as per following details:

- System: Standalone Solar System
- Product Model: Luminous SHL-10 which includes 10W Solar panel, 2 LEDs of 3W each, 1 Portable torch, a port for mobile charging, and an AC Adapter

The installation was proposed to be done in all houses of the village (Approximately 330 households).

### Workshop on Green and Social Entrepreneurship for inclusive and sustainable development in India

*Workshop held on September 18-19, 2013 at FAPCCI Hyderabad by EWB India in association with Center of Social Initiative and Management (CSIM) and Federation of Andhra Pradesh Chamber of Commerce and Industries (FAPCCI)*

The workshop commenced with 'Saraswathi Vandanam'. Dr. Ashok Agarwal, chairman of EWB India, welcomed the delegates to the workshop. The delegates were founders and senior staff of NGOs who attended the workshop on invitation. Dr. Agarwal shared the objectives of the workshop to create an Ecosystem wherein NGOs, EWB India and CSIM can join hands to identify opportunities to improve the quality of life of the needy through participation of Student members of EWB India. Prof. K.L.Srivastava, Director of CSIM, discussed about the programmed details and again highlighted that the key focus of the workshop is on sharing the success stories on Innovation; How to generate Income to whatever extent possible and need to have impact assessment process in place.

Mr. Shiv Kumar Rungta Sr. Vice President, FAPCCI highlighted that "Business Entrepreneurs generally focus on profits; where as Social Entrepreneurs focus on quality improvement of the citizens and then look at the profits."

Future Plan of Action:

- Each NGO was requested to identify suitable projects based on their relationships in a community, matching with Vision of EWB India.
- EWB India will share and identify a student/professional chapter willing to participate in the defined project.
- Furthermore all NGOs were requested to share areas wherever they need help & support and EWB India along with CSIM will try to identify suitable resource persons to support them.
- It was suggested to have a review meeting after 6 months to look at the progress and once again arrive at future plan of action.



*Workshop on Green and Social Entrepreneurship*

**NEWS**

**EWB International**

Redesigned website of EWB International – <http://www.ewb-international.org/>



*The redesigned EWB-I website*

We are proudly announcing the publishing of the redesigned website of Engineers Without Borders International. After several months of intensive work, the launching of an improved version of the website is a step further in recognizing the need to maximize information technology capabilities in terms of promoting the services of EWB to a larger audience that will be using our online system. We endeavor to bring in more information that will be useful to varied groups and to present them in a more user-friendly way. This way, we hope to make the improved website the convergence platform for the members, for the other demand-driven personals, and community-sensitive extension workers in the region.

**EWB Sri Lanka / EWB India**

**EWB Sri Lanka President visited EWB GITAM Hyderabad chapter in India**

EWB GITAM Hyderabad chapter in India, being one of the closest friends of EWB Sri Lanka, organized a seminar in association with Ministry of Environment and Forest and Deccan development on “Biodiversity and Renewable Energy Resources” on 24<sup>th</sup> February 2014 at GITAM University, Hyderabad Campus. This special occasion was enlightened by Prof. Ranjith Dissanayake delivering the keynote speech on “Lessons learnt from tsunami damage in Sri Lanka”. This occasion was graced by Prof. Sanjay, Prof. B Basavaraja, Dr. Ashok Agarwal and others. Special student presentations also highlighted this event and made it colorful. Special topics such as Bio Diversity Conservation and Use of Renewal Energy were among the discussed topics in this special seminar. Lot of burning issues of today’s world was conferred and certainly this would be an eye opener to nature lovers and partakers. Prof. Ranjith Dissanayake, who is the president of EWB Sri Lanka, was the chief guest for the inauguration of Tech Check Project in ZPHS, Rudraram, India. EWB GITAM University Hyderabad Chapter established a new Computer Laboratory named Dr. Ashok Agarwal Computer Laboratory and the opening ceremony of this event was also graced and lead by Prof. Dissanayake with the participation of several locals and also honorable guests from GITAM University. A memorandum of Understanding (MOU) was also to be signed between EWB Sri Lanka Peradeniya Chapter and EWB GITAM Hyderabad Chapter to work in collaboration and to share the knowledge and technology among keen and enthusiastic young engineers to reach the need and to change the world for the betterment. The platform was made and EWB Sri Lanka will power the gears soon to reach all aspects to fulfill the mission of EWB Sri Lanka.



*Opening ceremony EWB GITAM*

**EWB USA**

**EWB-USA Announces 2014 Premier Project Award Winners**

The EWB-USA premier projects are chosen annually based on the community projects they have worked on over the past year. The award recognizes excellence in EWB-USA projects and highlights projects that deliver high quality, sustainable solutions to help meet the basic needs of partnering communities abroad. This year’s winners of the 2014 EWB-USA Premier Project Awards are the EWB-USA Rice University Chapter, the EWB-USA Central Ohio Professional Chapter and the EWB-USA Arizona State University Chapter!  
<http://www.ewb-usa.org/news-and-media/-ewbusa-announces-the-2014-premier-project-award-winners>



*EWB-USA Rice University Chapter*

**Donor’s corner**

**Creation of a Global Engineer Program**



In addition to supporting on-the-group infrastructure development work in countries in Central and South America, Alcoa Foundation funds also are assisting EWB-I with its Creation of a Global Engineer Program. The program is creating and replicating the best practices of “learning through service programs” that develop skills in leadership, project management, communication, systems thinking and community and personal engagement. Educational practices are being targeted to help ensure that technical graduates have the skills and abilities to conceive, coordinate, manage and lead global infrastructure projects.

In 2013, EWB-I solicited program proposals from individual Engineers Without Borders International Member Associations and selected universities in Australia, Brazil, Canada, Norway, United Kingdom and the United States to receive grant funding, and projects currently are underway.

Creation of a Global Engineer Program	# of Team Members	# of Students Affected	# of Faculty/ Mentors
Australia	26	22,030	81
Norway	46	1,800	5
Canada	25	3,500	55
UK	18	2,563	15
Brasil	7	163	2
<b>Total</b>	<b>122</b>	<b>30,053</b>	<b>158</b>

**Photo competition**

Thank you for the photos of the projects you are implementing in your country. We encourage you to show off your photography skills by sending us more your shots of your activities in action. The best photos will be published in the EWB-International Newsletter and presented on the EWB-International Conference and General Assembly Photo Exhibition. Image should be submitted as jpgs. Each jpg should be a maximum of 300dpi and 5MB in file size, with your name and the subject in the title. Maximum 5 entries per person per contest. Send your photos on following email:  
[oliver@ewb-mk.org.mk](mailto:oliver@ewb-mk.org.mk)  
 Good luck!



*Solar power project Israel*