

The Center for Global Engineering

At the Technion – Israel institute of technology

Newsletter

Vol.3

YOU ARE INVITED!

EWB Technion exhibition is now on display in the lobby of the Elyachar central library. The exhibition portrays the EWB - Technion chapters' history and activity throughout the years, and tells the story of our four EWB groups.

Curator: Anat Har-Gil

For more details and tour coordination: ewb.technion@gmail.com

The entrance is free and open during library hours, see website:

<http://library.technion.ac.il/en/cen/>

Technology spot

Learn more about the sustainable technology solution our groups use.

This time:

Negev group and solar heating



The technology is based on using natural convection to force air through the heating system, in order to efficiently deliver heat to the room. The heater is made by a set of parallel pipes made of used aluminum pop cans. The cans are painted black to better absorb sunlight and the thin and highly conductive material assures heat conduction to the air. The pipes are fixed in a wooden box with one transparent wall to allow sunlight in. The box has multiple functions: it distributes and collects the air to/from the pipes, keeps the pipes together, prevents leaks, and more. At the bottom end of the box ducts intake cold air from the room, a convection current then shoots the warmed air out the top duct into the room. this way air is continuously circulated into the room and ensures that most of the room's air is heated. Systems' illustration: <http://goo.gl/ImYhgM>



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Ethiopia

The group [has successfully built](#) the rain water harvesting system in the village of Meskele Kristos, Ethiopia. The system was completed late May 2015, in full cooperation and collaboration of the village community, in partnership with SYHLA (a local NGO) and with the support of "World Families Australia". Currently the group is working on educational modules, training activities and water quality testing to insure successful use of the system. [Read more](#)



Negev

After building and testing of a prototype, the group has illustrated that the system conducts heat successfully (want to know how? See the "Technology spot" section in the previous page). The prototype was tested on the roof the Faculty of Civil and Environmental Engineering. The group is now challenged with the task of developing a larger facility, which could heat a kindergarten classroom in climatic conditions similar to the northern Negev desert. In addition, The group is in contact with their partners in the Bedouin village Um Etna'an, and planning a visit soon. [Read more](#)

Wind

The Wind group has installed its second turbine in AFAK school and since then visited the school several times, conducting educational activities and regular maintenance. In their latest visit on [June 2015](#) they taught the children about the concepts of ecological footprint and how we can work to reduce our own ecological footprint. They are also in the process of building another turbine while developing and improving a data collecting system. [Read more](#)



Biogas

The Biogas group is working on the analysis of a large survey conducted in the community of Namsaling, Nepal. An additional 35 biogas reactors were built in the community in this phase of the project, which brings the total to 87. Another 12 reactors will be constructed during the next months. In the survey, the team collected information about the impact of the biogas systems on the resilience of the community. The survey addressed issues of indoor air pollution, health, energy needs and water quality. The group has recently began their first steps of research towards a new project, that will focus on the improvement of the water quality in the schools of Namsaling. [Read More](#)



EWB group leaders

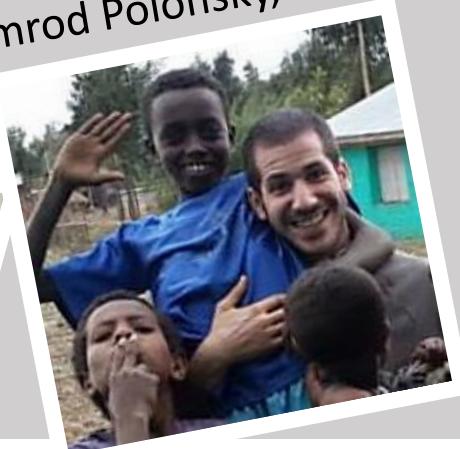
This year we congratulate three out of four of our group leaders whom are graduating.

Thank you!

Loic Le Goueff, Wind

Avner Almog, Biogas

Nimrod Polonsky, Ethiopia



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[Engineers Without Borders Technion](#)

