

Zawadi EcoVillage News

Activities of the Children and Youth Empowerment Centre and PSU

'Zawadi' is Swahili for 'gift.' This name was chosen to acknowledge that each street child has gifts to offer Kenya and the world. The Zawadi Villages will seek to develop and use these gifts to the betterment of the community.



The EcoVillage

Fourteen PSU students spent three weeks in Kenya in May-June to build prototypes of technologies for the Zawadi EcoVillage on the CYEC site. This was a culmination of two semesters' activities in humanitarian engineering and social entrepreneurship, involving more than 60 students who learned about the culture, politics and economics of Kenya as well as issues related to street children in Kenya. Working in multi-disciplinary teams, the students designed culturally appropriate solutions, from a systems perspective, in order to assist in the caring and nurturing of these children. With youth from the CYEC, the PSU students built prototypes of affordable technologies in sustainable agriculture, water harvesting and purification systems, renewable energy generation, and housing construction. Specifically, they built a high tunnel (greenhouse), a drip irrigation system, a small-scale biodiesel plant,

a bicycle-powered electricity generator, a system to collect and store roof runoff, a biological slow sand filter to purify and re-use waste water, a merry-go-round pumping system, and a rammed-earth structure. These prototypes are to be used as demonstration systems in preparation for scaling up and constructing the first full-scale EcoVillage.

The Lamuria Site

The initial Zawadi EcoVillage will be located in Lamuria, a small community in the Rift Valley. A preliminary community assessment was carried out by CYEC staff and youth and PSU faculty and students in June. As in many regions of sub-Saharan Africa, access to water is limited in Lamuria. Because of this, we plan to identify, develop and demonstrate technologies and practices relating to agricultural production, land use, water harvesting, power generation and entrepreneurship that will enable a community to thrive in a semi-arid environment. Local knowledge will be incorporated in the development of these technologies and selection of cultivars, and the Zawadi village will serve as a model and educational centre for Lamuria and the surrounding region.



CYEC.net

The Spring IST413 class at Berks created the new CYEC website. The students in the class researched cultural norms and legal issues in Kenya and worked with CYEC staff to develop the site. The site was designed to maximize usability factors such as information architecture and organization, overall usability, the ability to quickly search and navigate through the site and overall attractiveness. One of the more interesting challenges was to ensure that the site would meet the needs of a wide variety of users from differing cultural backgrounds. A content management system separates the site content from the design which allows clients to make changes to the site content without knowledge of the details of the underlying architecture such as XHTML, CSS, PHP or JavaScript. Check it out at www.CYEC.net.

Nyeri Forum

The first Nyeri Forum to review the PSU-CYEC collaboration and develop the Zawadi EcoVillage initiative was held in Nyeri 8-10 June. The forum, titled 'Youth and Sustainable Livelihoods: Our Common Future,' was attended by more than 30 participants including academics and representatives of local NGOs, government agencies and social service providers.



Healthy Youth Development

Five students from Berks travelled to Kenya to participate in a culturally and age appropriate sexuality education teaching experience. Emphasis was placed on looking at diverse health-related situations, exploring methods available for education, examining sensitive issues and materials, adapting existing education

interventions and developing strategies for working with communities from a societal perspective. The Berks students collaborated with CYEC students to determine the suitability and adaptability of HealthWise, a curriculum developed by PSU faculty as a comprehensive, risk-reduction life skills curriculum.

Related Initiatives

Mashavu

The Mashavu team field tested a pre-primary, tele-medicine, kiosk concept. The kiosk consists of low cost medical equipment designed by Penn State undergraduates. It uses a combination of student designed and open source software to record and monitor vital health information that can be shared with remote health care professionals.

Fifteen students, from the Colleges of Engineering, Information Science and Technology, Business and Health and Human Development, and the School of International Affairs, ran three demonstration clinics and met with nurses,



doctors and health officials to assess the feasibility of Mashavu. The demonstration clinics were an opportunity for students to gather information about the usability of the biomedical devices and test remote data sharing, while giving local Kenyans an opportunity to learn their vital signs, including temperature, pulse, blood pressure, height and weight. The meetings and interviews helped the students learn about health care challenges in East Africa and consider additional applications for Mashavu, such as follow-up health care. One surprising bit of information students discovered was there is a surplus of trained, but unemployed, nurses who could serve as potential kiosk operators or entrepreneurs.

Perhaps the most important outcome of the trip was establishing relationships with possible

Mashavu champions. This includes the CYEC staff and students, most importantly Mary Nekesa, the staff nurse at CYEC, and Sister Purity, director of Mary Immaculate Hospital in Mweiga, Kenya.

To learn more about the Mashavu project visit: www.mashavu.com.



Wishvast

The WishVast team designed and field tested a cell-phone based social networking system to facilitate trust building and social capital development. Due to the pervasiveness of cell-phones in the region, the team designed a system that would allow cell-phone users to connect as part of networks, similar to the way people in the US connect on Facebook,

LinkedIn or Twitter. The network also includes the ability to rate others, similar to eBay ratings, in order to build trust and allow more people to be connected for business. The technology proved to be viable in different scenarios ranging from people finding jobs to farmers selling their crops to entrepreneurs looking for financing. By connecting people in this fashion, the team hopes to help spur economic growth and alleviate poverty. The students met with nearly 100 individuals to gather data and test the concept. To learn more about WishVast, check out:

<http://sites.google.com/site/thewishvastproject/>

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