

Engineers Without Borders (Hong Kong) Annual Report 2013-2014

Foreword

1. Ever since July 2012 when Engineers Without Borders—Hong Kong (EWB-HK) reshaped its missions, we invariably set out our work in line with the new missions, which are repeated here:
 - To accelerate betterment in life of disadvantaged communities and promote sustainable development through the empowerment of engineering means.
 - To enhance the capacity of Hong Kong's professionals and their generations to come contributing to the communities in need.

Young Members Group (YMG) Committee

2. The second mission of EWB-HK is, “To enhance the capacity of the professionals in Hong Kong and their generations to come to contribute to the communities in need.” Hence emphasis was placed on the development of organization and structure of students in tertiary education and graduates, so that young people can participate in the relevant services and organization early in their lives, gather experience and trained as successors of EWB-HK.
3. The Young Members Group Committee (YMG) organized a service trip in collaboration with the Hong Kong Playground Association (HKPA) to a primary school in Gansu from 28 July to 4 August. It aims at experiential learning for the young participants, with a dual theme of repairing the school they visit and carrying out educational exchanges with the local students.
4. To achieve the themes of the visit, the participants went through several project planning meetings, two sessions of team building training and one day training in a workshop on minor technical repairs. In between these sessions, they were led by EWB-HK’s volunteer instructors in organizing the work details. We also entrusted to the EWB-HK’s participants to take to the school a solar cooker produced by the EWB-HK’s Humanitarian Engineering Challenge group and some of the service trip participants.
5. Twenty-seven young people participated in the trip with 9 recruited by EWB-HK. They are generally under 24 years of age. These 9 youngsters were selected from 19 applicants coming from the Hong Kong University of Science and Technology, the City University of

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Hong Kong, the Hong Kong Polytechnic University and the Hong Kong Shu Yan University. Travelling expenses of the participants were partly subsidized by the Hong Kong Commission on Youth.

6. On returning to Hong Kong, the participants expressed that they learnt a lot from the trip and achieved experiential learning. What is more, they built up fast relationship among themselves. Some of the participants continued with the mission of EWB-HK by joining YMG afterwards.
7. A Waste Management Task Force was formed by YMG in July 2014. Its members consist of university students and fresh university graduates. The objective of the task force is to “make use of engineering knowledge to establish more effective waste treatment solutions from small scale to applicable for society use.” The major tasks in the Task Force are food waste treatment, laboratory recyclable waste treatment, second-hand goods exchange platform and waste sorting.
8. The first mission of EWB-HK is “To accelerate the betterment in life of disadvantaged communities and to promote sustainable development through the empowerment of engineering means.” Project work described below does tally with this mission.

Humanitarian Engineering Challenge

9. EWB-HK is currently pursuing an UN initiative in supplying clean stoves to disadvantaged communities. This can directly benefit the 2.6 billion people currently suffering from the hazardous smoke and high fuel cost of traditional biomass or coal stoves and indirectly relieving people in most part of Mainland China from unhealthy smog which leads to high medical cost and numerous illnesses. Clean cooking is also a cost-effective and fast way to combat global warming.
10. To achieve this, we shall develop an "Open Source Cook Stoves Library" (EWB-HK OSoCool) designed for easy copying and adaptation in developing countries. For example, we are developing a solar cooker that will be a fraction of existing designs in terms of cost, weight, and time for assembly. We have identified several designs for solar cooker, biomass cook stove, and alcohol stove which can be quickly copied and affordably used by grass root communities and is in the process of fine tuning and documenting these designs.

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11. We have also conducted water boiling tests for some of the designs as well as common cooking appliances with interesting findings that can guide us in the design and deployment of the various clean cook stoves. With the preliminary test results, we are confident that affordable clean cooking can be practically implemented.
12. We now invite people interested in bringing clean cooking to the world to join us. It is a multi-facet mission and all kinds of volunteers and talents in event organising, administration, CAD/CAM, IT, carpentry, technical writing, illustration/presentation etc. are welcome.

Water Program China

13. This project aims at solving some water contamination problems in China, which are very extensive, affecting nearly 300 million people. EWB-HK collaborated with a Mainland NGO, Greenovation Hub (GHub) in their work called “A Glass or Clean Water”. Before the two organizations came into contact in June 2013, GHub has already carried out water purification work in over 70 sites in the Chinese villages. They requested EWB-HK to:
 - a) line up with water experts and provide appropriate water purification solutions that tally with the technology level of the places in question;
 - b) categorize water purification samples into prototypes when GHub completes the collection of such samples from 100 villages of China. The solutions of such prototypes will be disseminated to the Chinese population at large so that they can solve their own problems based on such information.
14. By November 2013, EWB-HK connected with five water experts, of whom a Civil Engineering Professor and a Principal Consultant of the Hong Kong Productivity Council are highly qualified and experienced experts. Although EWB-HK has not been done any actual water purification work up to now, our experts are doing their part. Appended below is an example:

“On 24 July, GHub sent an urgent request to EWB-HK for advice on sea water over running drinking water sources such as wells in the provinces of Guangxi and Hainan as a result of Super Typhoon Rammasun. The EWB-HK Water Experts replied to the satisfaction of GHub within 7 hours on receipt of the request.”
15. When all parties held the first meeting in November 2013, spirits were high, because all

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relevant personnel: those having close connections with target beneficiaries and places, experts and academics, those taking up the organizing role were present. Hence it was considered the basic requirements in serving the Chinese people in water purification were ready. But all those present at the meeting did not agree to the suggestion at paragraph 13b) above, because the problems on water vary in respect of time and place, and there are difficulties in categorizing them.

16. After visiting the two water purification systems designed by the Principal Consultant of the Hong Kong Productivity Council in December 2013, and visiting the Hong Kong Xing Fu Primary School in Yang Shan, Guangdong Province for checking water problem, led by the Civil Engineering Professor in January 2014, all the participants wished to have long term collaboration on this subject. They also considered setting up a Platform for interested organizations and individuals to join. From April 2014 onwards, the different parties were discussing what roles and contributions each could make to this Platform.
17. EWB-HK is likely to become a core organization of this Platform. It conceives forming its own volunteer team on water, training the volunteers in knowledge and capability so that they can carry out the research and actual purification work in Chinese villages.

Other Activities

18. The EWB Council organized /joined seven activities this year, which are:

9 January 2014	Introduced the work of EWB-HK at AECOM, an Engineering consultant company
20 February 2014	Introduced the work of EWB-HK at the Hong Kong University of Science and Technology
3 April 2014	Joined the 101 st Inauguration of the Engineering Society Hong Kong University Student Union (HKSU) on invitation
23-24 April 2014	Participated in the Exhibition hosted by the Engineering Society HKSU on invitation
5 August 2014	Members Gathering at Mei Ho House Museum, Shek Kip Mei
17 August 2014	Supported Grace Charity in an event called Double Track Cup by sending volunteers to distribute water at two check points
12 September 2014	Members Gathering at the Metropolis Mall, Hung Hom

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Organization and Structure

19. About the change in registration for EWB-HK from a Society to a Company Limited, since we have to apply afresh to the Inland Revenue Department (IRD) for exemption of tax, and EWB-HK has changed its missions in 2012, IRD needed to clarify a lot of points. Correspondence was exchanged over two years. IRD recently raised new questions. Hence it will not likely to take effect within this Organization Session before the AGM.
20. The new EWB-HK website took effect in May 2013 in which Members applications could be done on line. However, the Council will not be notified of such applications and has to assign someone to check it up on the web. This deferred the processing of applications. EWB-HK installed a Membership Notification System that took effect in September 2014 so that the applicants will receive immediate acknowledgement, and EWB-HK will be notified automatically and handle the applications immediately.
21. The Central Filing System Committee continued the work of uploading the backlog of files by batches to the Google Drive. Some 80% of the files were completed. It is expected that the Council Members can upload their own files to the Drive at the next Organization Session.

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