

[SE16-HAB]

Global Engineering and Sustainable Development

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Brief Bio
Session Leader(s)

Dr. Mirza is the Chairman of EWB India since April 2014 and was instrumental in catering the needs of under privileged members of the society in the areas of sanitation, water management, power (solar) and education. The list of his successful ventures can be seen at www.ewb-india.org.

Formerly the President of American University of Ras Al Khaimah, UAE, Dr Mirza was also instrumental in establishing George Mason University Ras Al Khaimah Campus and RAK Medical & Health Sciences University in UAE. He also held several important positions in Switzerland, USA and in India.

Abstract
Short description, including alignment with conference themes and objectives

In spite of global development there are global inequalities between privileged and underprivileged sections in every society, but most poignantly in developing countries, where abject poverty still persists. While the primary responsibility lies on local government to provide the basic necessities, the role of a non-profit or non-government organization cannot be ruled out and is taking a lead all over the world.

Engineers Without Borders is one such organization which has attained a “brand” in 58 countries. Though each Member country works on subjects which are more relevant for their respective citizens, each one in general creates a sense of responsibility among engineering graduates and other professionals to contribute to the development of the disadvantaged communities. Each member country tries to make the young engineering graduates or professionals to understand their social obligation and should be able to mold their knowledge, wisdom and aptitude to work for a better and more egalitarian society.

EWB India has been actively engaged in promoting the concept of humanitarian engineering among its members and the results are very positive. Improving sanitation facilities and continued research on bio-digestors, providing solar lights, providing smoke free stoves, street-cleaning drives has created awareness among the masses.

A discussion and sharing of projects, thoughts and ideas will be beneficial for all the members of the society, particularly for those from developing and under-developed countries.

Description
Proposed discussion focus

Calculations suggest that in the next two decades, almost two billion additional people are expected to populate the Earth and this growth will create unprecedented demands for energy, food, land, water, transportation, materials, waste disposal, health care, environmental cleanup, telecommunication, and infrastructure. Considering the problems that our planet is facing today, and the problems expected to arise in next few more years, the engineering profession must revisit its mindset and adopt a new mission statement - to contribute to the building of a more sustainable, stable, and equitable world.

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Description (Cont.)

An issue of equal importance is the education of engineers interested in addressing problems specific to developing communities. These include water provisioning and purification, sanitation, power production, shelter, site planning, infrastructure, food production and distribution, and communication, among many others. Unfortunately, such problems are not usually addressed in engineering curricula hence they could not address the needs of the most destitute people on our planet.

Engineers of the future must be trained to make intelligent decisions that protect and enhance the quality of life on Earth rather than endangering it. Preparing engineers to become facilitators of sustainable development is one of the greatest challenges. Meeting this challenge may provide a unique opportunity for renewing leadership as we enter the twenty-first century.

Objectives

Justification and expected impact during and after the conference

The word “engineer” comes from the word “genius” and hence it is expected that with his/her knowledge, wisdom, aptitude and skill he/she should be able to take up the task to solve the societal basic problems which are health, sanitation, power, water management, transportation, infrastructure, etc. It has been observed that the more we are propagating the term “service to the society,” the more response we are getting, particularly from the younger generation. Government alone cannot take up these challenges which are growing exponentially.

Though EWB USA, EWB India, EWB Australia and EWB UK are in forefront, but still there are more than 62 countries where EWB actively working with young students and professionals and trying to find sustainable solutions for the growing problems.

Corporates and business houses should also come forward and fulfill their obligation under Corporate Social Responsibility (CSR).

Target Audience

- Engineering graduates, young professionals who are keen to work for the betterment of the society.
- Heads of business houses who can fund the projects
- Members from Non-Government Organizations, Community Leaders
- Faculty/academicians who can be convinced to take up this subject to their classrooms and continue to develop the mindset of the student irrespective of their academic interests.