

Providing Water to Fight Global Poverty – Potential roles for engineers in developing countries



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Abstract

The scope of the global water crisis is immense. Nearly 1.2 billion people in the world do not have access to safe drinking water and about 2.6 billion people are without access to adequate sanitation. While this poses a major burden on human health and well being of millions of people every year, it also has become a major developmental challenge. Too much productive time is lost to provision of water and to water-related illnesses. Lack of these very basic human necessities also, therefore, directly impedes eradication of poverty. One may argue that the provision of safe water and adequate sanitation to everyone, which may require an additional investment of US\$20 billion a year, can provide the impetus to mobilize economies at the community level. Creation of new water-related livelihood opportunities can, and in a few cases already have, lift a community out of poverty and afford them a better quality of life. For such a process to be successful, engineers and technician can play significant roles in three different ways. First, design and deployment of water infrastructure are primarily engineering tasks. Many developing countries fall behind due to insufficient numbers of professionals to deal with this problem. Second, training of communities to tackle their own problems requires the type of expertise engineers are well-equipped with. Building of capacity at local levels can be a major contribution in overcoming the global water crisis. Third, operation and maintenance of water supply and sewerage systems are traditionally considered within the engineering realm. Perhaps some innovations and out-of-the-box thinking by engineers can lead the way to find better ways of dealing with the water challenges. By engaging with local communities, engineers can also learn better on how to interact with their “clients” and better understand the societal context of their work.