

# Engineering Design for the Developing World

## Spring 2008

### Assignment #1

Due: 28th April, 2008, via email.

Write a brief analysis of the well-head filtration technology developed by Arup SenGupta. Your analysis should include some assessment of this technology with respect to:

- Scalability. What changes to the technology, marketing, or deployment strategy would help in increasing the penetration of this technology in arsenic drinking water affected areas?
- Sustainability. What are the longer term consequences to both the local and wider communities from the use of this technology? Is the technology and its mode of deployment sustainable?
- Business opportunities. Does the technology enhance local businesses or create potential business opportunities?
- Technological appropriateness. Is the technology suitable for management within these communities? Can it be maintained with the current education levels within the community?
- Cultural appropriateness. Does the technology integrate well within the cultural context of the region?
- Community benefits. What are the benefits to the local communities; and what are the disadvantages?

The above are suggestions for the basis of your analysis. You are encouraged to address other aspects of the technology and its implementation that you feel are important.

The course web-site

([http://www.ece.ucsb.edu/~roy/cgi-bin/makepage.pl?nav=course\\_eddw](http://www.ece.ucsb.edu/~roy/cgi-bin/makepage.pl?nav=course_eddw)) contains several reports and papers discussing this topic, as well as a paper from Prof. SenGupta describing the technology in detail and describing its implementation in India.

Please submit this analysis as a PDF document (4 pages maximum), emailed to me by the above date.