A Community-Based Approach to Sustainable Development

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I visited South Africa in July 2010 to collect case study material from a sustainable development project being undertaken by the Universities of Venda and Virginia. The project is mainly directed at addressing problems at the village level in the Venda region of the Limpopo Province. I was particularly interested in understanding the successes, failures, and ethical dilemmas encountered throughout project execution as the valuable lessons learnt can inform projects being undertaken in other developing countries.

The project team used photovoice and message boards to promote community engagement. The photovoice technique combines photography with social action. In the Limpopo Province, it was used to gather information on different levels of access to potable water. The technique was successfully used in 2008 and 2009 selected parts of the Limpopo Province (Tshapasha and Tshibvumo) to capture views from different age groups (children, young adults and older people). In follow-up activities, additional needs and changes in requirements have also been collected for use in the design of new projects. Message boards were put up in nearby schools as part of the community engagement strategy. The use of the board is linked to an educational program directed at teaching the children to respect water and existing projects. The children are then encouraged to create posters summarizing the lessons they have learnt for display on the message boards which forms part of the outreach to a broader audience. The message boards can also be used by community members for brainstorming and sharing ideas.

Another initiative was directed at providing clean water using a slow sand filtering system. Slow sand filters use biological processes to clean the water without using chemicals or electricity. The system in Tshapasha triggered a community problem. The quantity of water being dispensed was not enough. An assessment of the situation revealed that a low water pressure was at the root of the quantity issue. To address this, the project team elevated the tank. Another issue that emerged was that the 1m of sand that was supposed to be there was missing. The filters had not formed the biological layer that is required for the filtration process.

Further work in the area of water supply has started assessing the feasibility of implementing point of use filtration using ceramic water filters. Ceramic filtration is based on the use of porous ceramic (fired clay) to filter microbes or other contaminants from drinking water. The work done so far has focused on assessing the feasibility of setting up a factory for producing ceramic pot-style filters. If successful it would result in cheaper filters. It will also provide employment for the local people.

The project team also wanted to assess the feasibility of using Moringa plants as a strategy for addressing malnutrition. The Moringa leaves are rich in minerals, all the essential amino acids, proteins as well as Vitamin A, B and C. The tree can also be used for the generation of biofuels. The project team was not able to test the nutritional benefits of the tree. As soon as the trees planted at Tshapasha sprung up, livestock in the community ate all the leaves.

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