

# **Access to Safe Water for the Bottom of Pyramid: Strategies for Disseminating Technology Research Benefits**

*First  
Half Yearly  
Progress Report*

Submitted to



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## Background

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New and emerging technologies such as nanotechnology have the potential to revolutionise the way we address poverty alleviation and access to water. The challenge lies in taking these technologies from the laboratory to the bottom of the pyramid (BoP). In an initiative supported by The Department for International Development (DFID), UK, the Development Alternatives (DA) Group seeks to address this challenge.

Phase 1 of the study provided a good understanding of the issues that prevent these technologies from benefiting the masses especially with respect to providing access to safe drinking water. Significant findings from the literature review, expert stakeholder consultations and the field survey with end users highlighted that cost effective Nano-based water purification systems are available in laboratories and markets today. Though nanotechnology based systems have high potential, they have not penetrated the market especially the BoP segment. There was a keen interest among the stakeholders to take forward the research on delivery models and risk containment, which were agreed to be critical issues that needed to be addressed in order to penetrate the BoP. .

Phase 2, the current phase, will use the learnings from Phase 1 to pilot delivery models for both community based and household based water purification systems. In this phase, the project envisions :

- Technology Packaging of existing nanosilver based products for BoP markets
- Developing innovative communication tools for awareness, behaviour change and demand generation
- Piloting unique and innovative partnerships and service delivery models (2-3) and test their potential for scale up
- Developing a package of practices incorporating inputs for risk management for nanotechnology based products to enable development of risk management policies and strategies in all developing countries

## Progress to Date

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The project was kick started with an Inception Workshop in November 2011. The workshop introduced the project to our partners and invited feedback from experts. The progress to date has been under the four major areas of work.

### Technology Packaging

One of the foremost activities under this phase was to understand the market and supply chain of existing water filters. An extensive literature survey was undertaken. In addition consultations were held with various stakeholders in the supply chain. These included scientists working in laboratories developing technologies as well as scientists in industry R&D cells. Discussions were also conducted with distributors and entrepreneurs who have taken some nanotechnologies forward. A small survey was conducted with retailers in New Delhi to understand the dynamics of the supply chain from the production unit to the customer. The findings from these have been captured in the Technology packaging study attached.



### **Communication Packages**

Under the project, innovative communication packages were to be designed to create awareness among the end users. The strategy for these communication messages has been designed.

The key messages that will be communicated to the end users will be:

- The importance of safe water
- The Health and Water Nexus
- Treatment and Management of water

Tools to disseminate the messages will be developed based on this strategy.

### **Service Delivery Models**

The reporting period also saw the team conduct extensive research on existing service delivery models. Lessons from these models are being fed into the design of the pilots.

The location for the pilots is being short listed based on the water quality of the area. The pilots will be implemented in areas where the water quality is reported to be poor and there are not enough options to remedy the situation.

### **Risk Management**

In order to address this issue, consultations with experts have been undertaken. The team has had discussions with scientists in laboratories and industry to understand the steps taken by them to manage and contain risks, especially those related to nano materials.

In order to further discussion on this topic, the team has tied up with Indian Institute of Technology, Chennai for an international conference on nanotechnology in September 2012. The DA group will be coordinating a 2 hour session on “From Lab to Land : Issues and Concerns of Nano Technology Application in Developing Country Context” The objective is to discuss the life cycle issues of Nano technologies and appreciate the issues of concern. Further elaborate on the package of practices that need to be promoted to contain the problems if any while the research is continuing, especially keeping in mind the socio-economic, regulatory and political contexts in mind.

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### **Next Steps**

The next two quarters the team will focus on the following activities.

#### **Communication Packages**

The tools to take the communication messages forward will be finalized. These will then be rolled out in the pilot site in collaboration with SHG's, *Paani Panchayats*, Water User Associations, Sanitation Committees, ASHA Networks and other Village Level Institutes.

#### **Service Delivery Models**

Based on the information collected, the delivery model will be designed. The model will particularly take into account aspects of

- Disclosure at various stages of production and distribution,
- Disposal at the production and consumer ends,

- Efficiency in cost across the supply chain.

One of the pilots will be rolled out in the field. Preparations for the second model will be underway in this duration.

### **Risk Management**

Majority of the work in the next quarter will focus on preparing for the workshop. Two background papers are being developed.

After this workshop, further consultations will be held with policy makers and practitioners to build a package of best practices. These will lead to recommendations for a risk management framework.

### **List of Annexures**

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1. Technology Packaging Study Report
2. List of consultations