

# **Consultations and Capacity Building Initiatives for Dissemination of Improved Water Technologies**

## **Final Report**

**(1<sup>st</sup> April 2013 – 31th July 2013)**

### ***Submitted to***

**India Water Partnership**  
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## 1. Executive Summary

As proposed earlier the overall goal of the project was to promote efficient water use through productivity improvements and water saving technologies for livelihood improvement, better health and sanitation. In order to do so, Development Alternatives had organised various consultations and capacity building initiatives with water users associations, community based organisations, local governance bodies, for dissemination of improved water technologies and best practices especially for domestic water consumption. These were primarily done at various locations within Delhi/NCR. A national level consultation was also organised in Delhi with an objective to bring together diverse stakeholders to deliberate and share their experiences on various low cost household water treatment and safe storage techniques.

In order to sensitize and create awareness among stakeholders on improved water technologies for domestic water various activities were taken up from the month of April 2013 to July, 2013.

## 2. Introduction

India with its population of over one billion faces a severe challenge in providing basic services for its people, including safe drinking water. In many regions, water is scarce; wherever available most water sources are contaminated due to agricultural & industrial pollution and lack of appropriate sanitation. In India 97 million people lack access to safe drinking water and the health burden of poor water quality is enormous. The World Bank estimated that 21 per cent of the communicable diseases are related to unsafe water. Of these, diarrhea is one of the main killers of children under 5 years of age and a persistent disease that undermines child development.

One of the major reasons of these diarrheal diseases is lack of awareness among different user groups. Hence it is imperative to create awareness and sensitize various stakeholders on improved water technologies, various ways and means to treat water at domestic levels. It is also necessary to build the capacity of the local workers (NGOs) so that they in turn can create awareness in the community. Apart from that children are the future citizens and change makers and they also need to be sensitized so that the demand for safe drinking water can be created.

## 3. Objectives

To overall objective of the project was to organise various consultations and capacity building initiatives with water users associations, community based organisations, local governance bodies, for dissemination of improved water technologies and best practices especially for domestic water consumption. In order to achieve this goal a series of activities were conducted by Development Alternatives from the month of April to July and the details of them are as follows:

#### 4. ACTIVITIES UNDERTAKEN IN APRIL, 2013

##### Consultation with water users

In order to understand the current status of water quality issues, a field survey was taken up in the slums of Madapur Khadar, Bhawar Singh Camp, Savda Ghevda, Seema Puri of Delhi and interaction with 40 households were done. It was noticed that dwellers of these slums have encountered problems related to the quality (tastes) and hence prefer going for some kind of affordable treatment technology for the water (especially domestic purpose). Apart from this a meeting was also organized for local NGOs who are working as community anchors in 9 slums of Delhi and trying to address issues related to water specially for domestic consumption. 20 community anchors attended this meeting and since these anchors are already trained and understand the issue, the purpose of the meeting was to understand & share the methodology they follow in reaching out to the community with affordable household water treatment technologies and challenges they face. In order to make their communication more effective, efforts were also made in building their capacity by providing them with information / communication material (flipcharts, brochures etc) developed by DA under other programmes for better reach.

##### Awareness activity in school

Since school student are the agents of change and being the future citizen needs to be informed about the issues related to water. In order to reach out to the water users in the slums (BoP) School Awareness Campaigns were carried out in the MCD schools which were attended by 200 students from secondary classes. These schools were located around or near the slums.



Awareness Activity at MCD School

The Awareness Campaign was carried out in the school premises during school hours. The main focus of the awareness campaign was to make them aware of importance of clean drinking water and what could be the possible, suitable and affordable methods to treat and store it. The campaign was designed as an Interactive Session which facilitated discussion and interaction with the students which would involve them more actively in the learning process.

#### 5. ACTIVITIES UNDERTAKEN IN MAY, 2013

In order to create awareness and promote efficient water use through an improved and water efficient technologies, Nukkad Nataks and school awareness activities were conducted in the month of May.

### **Nukkad Natak Design**

A Nukkad Natak was organised in the slums of Madanpur Khadar, Shahid Nagar and Rangpur Pahari with the essence of all desi flavours of dialogues to make it informative & entertaining. Around 50-70 people attended the Nukkad Natak in each slum. The entire play was designed to connect with the audience (urban poor) and to make them visualize the importance of quality of drinking water and the results of contamination. Highlights of the play were the indications of water contamination, ways through which water gets contaminated, ways to purify it importance of clean water and cleanliness of surrounding etc.



Nukkad Natak in slums of Delhi/NCR

### **Awareness activity in School**

In order to spread awareness an interactive session with 10 students of each class in Chetan Gayan Mandir was conducted for 30 to 45 minutes. Different kinds and methods of drinking water treatment were discussed with the help of flip chart and pictures. Discussion on importance of treatment of drinking water before consumption, how diseases and deaths can be avoided by simple and cost effective water treatments were also done.



Awareness Activity at MCD School

## **6. ACTIVITIES UNDERTAKEN IN JUNE - JULY, 2013**

In order to create awareness and promote efficient water use through an improved and water efficient technologies, consultation meeting and a National Workshop was conducted in the month of June and July. Since there was a National level workshop planned in the month of July (10th July, 2013) preparation for the workshop started in the month of June. The purpose of the workshop was to discuss the issues on appropriate household water treatment and safe storage and the policy

imperative with a larger stakeholder group. In order to do so a small consultation (expert group) meeting was held on 2nd July, this was followed by the National level workshop on 10th July, 2013.

### **Expert Group Meeting**

An expert group meeting was organized on 2nd July at Development Alternatives Headquarters, New Delhi. The purpose of the meeting was to discuss the issues related to drinking water quality and the challenges faced by the Bottom of Pyramid. There were discussions on how household water treatment and safe storage can be taken up at policy level.



### **National Workshop- Household Water Treatment and Safe Storage**

In order to discuss the issues on appropriate household water treatment and safe storage and the policy imperative with larger stakeholder group a national level workshop on Household Water Treatment and Safe Storage was organised on 10th July 2013, at Development Alternatives office. The workshop was attended by 58 participants from various organisations working in the area of water. The workshop started with an inaugural address from Mr. R.K.Khanna, former Chief Engineer, Central Groundwater Commission. He highlighted the issues of water quantity and quality and emphasised on the need for appropriate HWTS methods and awareness on that. The key note address was given by Dr. Jugal Kishore, Maulana Azad Medical College. He highlighted the importance of safe drinking water for human health and the implication it can have on various aspects related to human health. . He also emphasised on the fact apart from safety at consumption level it is also important to have a safe storage. He also mentioned about the need for HWTS as if is quick, effective, low cost, sustainable etc. He also discussed about some of the effective ways and means that can be adopted under HWTS.





There was also a panel discussion on the policies and programmes for HWTS. The panellists for the panel discussion were Dr. Lalit Sharma (IRRAD), Dr. Somanath Bandhopadhyaya (Safe Water Network), Mr. Murali Remisetty (Freshwater Action Network South Asia), Dr. Dhanuraj (Centre for Public Policy Research), Dr. Amit Nair (WASH Consultant), Dr. Abhay Kumar (Eureka Forbes Limited). The panel discussed issues of governance, capacity building and regular water quality monitoring systems. Followed by the panel discussion a policy note developed by Development Alternatives on the Household Water Treatment and Safe Storage on the basis of their work in the areas of Delhi slums was shared with the participants for their view/comment/suggestions. The policy note captured some of the policy and programme recommendation for promoting Household Water Treatment and Safe Storage (HWTS) among urban poor. The detail of the workshop is attached in Annexure 1.

## **7. OUTCOME:**

The series of activities from the month of April to July led to a group of sensitized and aware stakeholders who can take informed decisions on improved water technologies for domestic water resulting in better health and sanitation for their communities.

### **Promoting Household Water Treatment, Safe Storage and Handling among urban poor**

The HWTS National workshop was held on 10th July 2013 at Development Alternatives World Headquarters. The programme was moderated by Ms. Sachi Singh, Executive- Development Alternatives, who emphasized on the importance of various stakeholders in taking HWTS forward. The welcome address was given by Mr.R. K .Khanna (Former Chief Engineer, GWB) He started with thanking all the panellists and participants for the workshop. He stated that water quantity and quality are one of the major concerns and we are responsible for the current state of affairs. Water related problem is not just due to increase in population but also because of behaviour and lifestyle change. He highlighted about Development Alternatives initiative on HWTS for years and invited Dr. Vijaya Lakshmi , Vice President & Head Innovation Systems Branch , DA for the inaugural address. Dr. Vijaya Lakshmi started with a presentation on Development Alternatives work in Water Sector. At the onset of her presentation she shared that people think its responsibility of the government for the safe drinking water but at the same time it is also responsibility of individuals for the same. She raised few questions as to what can be done in order to provide safe & clean drinking water to all. One of her concerns was also that what kind of safety measures and solution can be taken so that the message is taken forward. In her presentation she gave a brief on DA's mission and vision. She briefly mentioned about the initiative such as community led environment action network, on household water purification solutions (Point of Use) etc.

Post her presentation Kushal, a community anchor from Ashadeep Foundation (a grass root NGO working in the area of water and sanitation in slums of delhi) shared her views regarding HWTS during the implementation in Kalyanpuri and Seema puri area. She mentioned about how water quality and sanitation was a big challenge in the area and through regular interaction how she and her fellow anchors have been able to create awareness with anganwadi worker and with school programmes.

Post a brief by her the key presentation was given by Dr. Jugal Kishore from Maulana Azad Medical College. In his presentation he mentioned that health impact is one of the major or centric in human life and drinking water has become a major challenge as having access to poor quality drinking water can lead to several health impact and diseases such as Hepatitis A, E, Cholera, diarrhoea & dysentery which could lead to death. The joint monitoring by WHO and UNICEF has validated the fact by showing high IMR due to lack of access to safe drinking water. He referred to certain case studies done in Bangladesh. He also emphasised on the fact apart from safety at consumption level it is also

important to have a safe storage. He also mentioned about the need for HWTS as if is quick, effective, low cost, sustainable etc. He also discussed about some of the effective ways and means that can be adopted under HWTS. He also highlighted about the new technology such as RO and its demerits as it removes calcium and iron and some of the essential salts and metals hence one of his suggestion was also that all new technologies should be tested any scientifically proven by an agency. He also emphasised on the aspect of safe storage. He also mentioned that apt from just taking care of the PoU (Point of Use) we also need to look at our environment which pollutes the water bodies (with organic and inorganic parameters).

In his presentation he emphasised on the need for safe storage, he also referred to the bottled water not been safe and we need to have innovative systems such as technology should be evidence based and need based, social marketing of HTWS should be promoted, research to study the affect of structures for storage should be done and technologies should depend on the local area demand.

There was a Panel discussion on the policies and programmes for HWTS

The first panellist to speak was Dr. Lalit Mohan Sharma (IRRAD)

He referred to issues such as high levels of nitrate in water and leading to diseases like blue baby syndrome. He said that there is a national level health mission but we are still lagging in the water sector. There is enough of capacity building for the ASHA and ANM working but the Panchayats do not have enough of help in terms of capacity building for planning for water safety. He also said that we need to think on what kind of mechanism and need to test their workability. In rural set up it becomes difficult to tell them and convince them about the problem in water. He mentioned that he has also used the Jal TARA testing kit and undertaken water quality test to convince people. He also emphasised on long term engagements with the community. The communication and IEC material are gender sensitive and female centric. Regarding the technology he said that the technologies /solution provided to people should be easily useful and should pose less burden on the user.

Second panellist was Dr. Somnath Bandhopadhyaya , Safe water network

He said that it is necessary to have good governance. One of his key question and argument was on how do we distinguish between availability and quality as unless the available water is not potable it is in real terms not available. He also raised the question of how do we create infrastructures so that the water quality becomes a routine affair. According to him at local level a single silver bullet approach is not going to work. While moderating the session Dr. Vijaya Lakshmi referred to the kind of initiative safe water network has taken in developing local businesses and building up local

people's capacity. She also mentioned about an initiative taken up by Mr. Shiv Kumar in ISC Bangalore

Mr. Murali Remisetty (Freshwater Action Network South Asia)

He also highlighted the need for HWTS and emphasised on the fact that ensuring safe water to every person is a shared responsibility of government, private players public etc. he emphasised on some point such as :

- Right set / adequate infrastructure
- Treatment system
- Allocation of finances
- Infrastructure development (money allocation)
- Quality testing (who does it , how frequently needs to be done etc)
- Are there systems/ accountability of the system
- Water bill- how much water is regularly monitored and billed accordingly (quantity and quality)
- What kind of overseeing mechanisms are there (government , users etc)

He also referred to Behaviour change as one of the key factor and there needs to be a constant requirement of investment for the same.

There needs to be advocacy for educating people for water and water related issues. Some budget also needs to be spent on awareness, knowledge etc. He also insisted that safe water and health should not just be restricted at household level but should be states level and convergence with other departments should be done. Range of HWTS options should be tested and standardization should be done accordingly. Affordability at local level should also be considered and water quality testing process should be institutionalized.

Dr. Dhannuraj, Centre for Public Policy Research

He stated that involvement of various departments is a challenge along with it one of the major challenges is infrastructure. There is no availability of water quality data. One of the issues in India at policy level is that the pricing for water is substandard. Poor need subsidy and need

clean and safe drinking water. There needs to be community managed water resources and ground water and surface water should be treated as one.

Mr. Amit Nair, WASH Expert

Mr. Amit Nair highlighted key issues

- He also said that in order to have sustainability there needs to be system beyond ASHA to take the things forward.
- Capacity Building- need to be done- Along with source the concentration is also important. All the 12 essential parameters should be monitored. Need to have sanitary surveillance and need to enhance the knowledge.
- Water testing is not done regularly
- Ownership is important- there needs to be an ownership by the people and it should not be for free but that is also a big challenge.
- And the last but most important one is awareness creation.

Dr. Abhay Kumar from Eureka Forbes Limited

He said that awareness at school level is very important and children are the one who can change the habit and culture. He also shared his view as in villages the major concern is related to water availability and not quality. There is a gap between the NGOs and Panchayats and the health centres and this gaps needs to be filled.

During the question and answer round few questions were taken up due to less available time , one of the question raised by Mr.S.S.Narang was that there is clearly a problem of implementation and there should be a core group which should be formed and should send recommendation to the government and emphasise on regular monitoring . BIS should also make some standards and procedure for the sample testing. Also one of the suggestions raised by Mr. Siddharth Bountra was to look for options and solution for quick and rapid testing of bacterial contamination in water.

## Policy Brief (By Dr. Dipender Kapur)

Dr. Dipender Kapur referred to the Lokniti study and most of the conclusions drawn from WHO's study. Some of the points covered in his presentation by Dr. Dipender Kapur were following:

- Prioritise awareness – on a long term basis
- Face to face communication
- Promote simple HWTS Solutions
- Awareness and motivation from local leaders
- Support from profit and non for profit organisation/institution to market HWTS (Document what should work and what should not)
- Promote innovative measure for HWTS that reduces the cost of water treatment.
- Promote safe storage.

After Dr. Dipender Kapur's presentation Ms Urvashi (Discussant) from Michael & Susan Dell Foundation spoke about the kind of work her organisation has taken up in the area of water and sanitation. According to her experience she said that when it comes to poor often the concern is more about reliability, availability and affordability. She also said that regarding the quality standards it should be a collaborative effort. She referred to the mission (steering committee) being referred to be a bit difficult to achieve and the question of usability being also a major issue. We also need to strengthen the supply chain so that the use of the technology does not get interrupted.

One of the suggestions given by a participant was related to urban planning perspective and his suggestion was to look at water management plan also when a new MCD plan is made. Evidence building is important for impact and influence. Mr. Ranjan Panda said that in government some time they do not even recognize their own committees. He also suggested that the recommendation should not look like promoting technology or product. It should highlight local availability, low cost, ownership and management. Deepanshu from Aqua Foundation also referred to issues related to secondary contamination. Dr. Diksha from IP University suggested that stringency should be there in order to deal with the imbalance related to water availability. Mr. Sridhar Nath referred to the incidences of water

wastages in government colonies and hence there should be stringent regulation for usage. Mr. Khanna said that there should be some incentives for saving water also. A representative from water for people also said that in district planning committees' water can be taken in planning process.

Dr. Dipender Kapur said that while making the recommendation it was considered that often recommendations as based on little larger extend but our efforts will be to try and put out points which we felt we were confident about and they may not be immediately effective.

The vote of thanks was given by Dr. Alka Srivastava. She thanked all the participants for taking out their valuable time from the busy schedule for the workshop. She also thanked the panellist for the point and discussion for policy sessions.