

## WIN-KPCSD Roundtable: Innovations to Drive Social Change

### Summary discussion notes

**Session Date:** 10.Jan.2020

**Time:** 9.30 am to 5 pm

**Venue:** Indian Institute of Technology, Gandhinagar

**Organizers:** WIN Foundation and the Kiran C Patel Centre for Sustainable Development, Indian Institute of Technology, Gandhinagar

#### **Objectives of the session:**

To bring together WIN and KPCSD-IITGN partners and other organisations/experts in (i) **Water and Sanitation** (WATSAN) and (ii) **Maternal and Child Health** (MCH), for a roundtable discussion:

- To present all projects / products and other initiatives with common objective to drive community change
- Engage with major challenges in WASH & MCH towards SDG 6, 2 & 3
- To discuss Implementation, sustainability and scalability of the projects after the completion of the project period
- To discuss on how to take research projects to market/implementation level i.e. through a startup or technology transfer to industry
- To discuss how to introduce products and solutions by startups to social impact target markets / communities
- To discuss significant initiatives by others in these domains
- Creating supportive ecosystem and partnerships among diverse stakeholders

#### **Session Moderators:**

##### **1. Water and Sanitation – Roundtable session**

**Prof. Jaichander Swaminathan**, Kanchan and Harilal Doshi Chair Asst. Professor - Mechanical Engineering, IIT Gandhinagar, Kiran C Patel Center for Sustainable Development

##### **2. Maternal and Child Health – Roundtable session**

**Mr. Rajendra Joshi**, Managing Trustee, Saath Charitable Trust

Around 70 Participants actively participated in the roundtable, provided constructive suggestions and offered their support in initiatives to drive and bring social change in our focused domains; (i) Water and Sanitation and (ii) Maternal Child health

In particular, many of them also offered to support innovative startups for validation of their products in among communities where they work, and provide qualified product feedback.

## Water and Sanitation (WATSAN) - Round table session (10 am to 1 pm)

At the outset, Prof. Achal Mehra and Prof. S. Jaichander from KPCSD and Mr. Ron Mehta and Mr. Paresh Vora from WIN Foundation, made a brief introduction to KPCSD and WIN Foundation, respectively, and also talked about need for collaborative action for scalable and sustainable social impact as the prime objective for roundtable.

### Following this, brief presentations by WIN sponsored project partners were made:

1. Micro-component classification of household water use, *with IIT Gandhinagar*: for possible recycling and reuse of water. Presenter – Prof. Manish Kumar
2. Fluoride and Arsenic removal through novel approach: *with IIT Gandhinagar*: to remove fluoride and arsenic ions through a single compound molecule. Presenter – Prof. Manish Kumar
3. Cyber-physical water distribution system: *with IIT Gandhinagar*, for Scada based administration, control and monitoring of water distribution, with intelligent leakage detection. Presenter – Prof. Babji Srinivasan
4. Comprehensive village development in 6 villages in Bavla taluka, Ahmedabad District: *with VIKSAT in association with Niswarth*: including Rain Water Harvesting in 10 schools and Zero Waste management in 2 villages. Presenter – Mr. Ravindra Wagh
5. Participatory Ground Water Management: *with Arid Communities and Technologies (ACT)*: for village water conservation and security. Outcomes: Village level Bhujal Jankars trained, water security plans prepared for 19 villages, over 350 water recharge structures done, nearly 20% water deficit bridged in target area. Presenter – Dr. Sazina Bhimani
6. Model WATSAN Infrastructure Design: *with CTARA, IIT Bombay*: for towns of population of around 20,000 and developing an IT design application for future re-use: done for 2 towns in Maharashtra. Presenter – Prof. Bakul Rao
7. Chakra rural household nano-technology based water purifier: *with Dept of Chemistry, IIT Bombay*: through capacitive deionization, using nano-tech – can handle water upto 4000 TDS, with less than 5% wastage. Presenter – Prof. Chandramouli Subramaniam
8. Convert output of Sewage Treatment Plant to Potable quality: *with IIT Kharagpur* through a containerised multi-stage cost effective water treatment plant, with expected cost below 20 Rs/kL. Presenter – Prof. Brajesh Dubey
9. Portable decontamination filter using Surface Engineered Particle technology: *with IIT Gandhinagar*: compact and efficient, bacteria and other pathogens removal. Presenter – Ms. Deepa Dixit, under guidance of Prof. Chinmay Ghoroi.

### Post Introductory Discussion Key Points:

- **Regarding innovations to tackle challenges for sustainability projects in water and sanitation:**
  - A few startups in the field of water and sanitation briefed about their products and services. Many other organizations expressed willingness to support them for product trials with user communities.
  - Encouraging projects other than RO might be beneficial as (i) RO is already heavily researched, (ii) RO by itself does not fully remove microbes and pathogens and (iii) RO wastes substantial water and energy.
  - Fostering pilot scale testing to a wider audience through WIN partners and other community focused organisations can help get a realistic data set for implementation at later stages for research projects as well as budding startups.

- **Other aspects**

- Improving focus on Information flow regarding technology and technology solutions through some established media among all stakeholders will be beneficial for knowledge sharing.
- Establishing an intermediary organization to facilitate communication with Government Services and ordinary citizens would be really helpful in the long run. This will be very important to solicitate advocacy in research to implement pilot scale setup on field.
- In sanitation, there is a need for better engineering design for toilets, for better long term maintenance.
- Sanitation and hygiene is critical for health and nutrition and has been proven to impact child nutrition outcomes.

## Maternal and Child Health (MCH) - Round table session (2.30 pm to 5 pm)

Mr. Rajendra Joshi, Founder Trustee of Saath Charitable Trust, started the session with his opening remarks about objectives of the session.

### Introductory presentations made by WIN project partners:

1. Dr. Takor Patel presented on Sevak Foundation initiatives for health as well as sanitation. Health initiatives included screening of 19000 women for anaemia using a non-invasive device supported by WIN. They have also constructed RO plants, toilets among water and sanitation initiatives.
2. Child Nutrition Centre of Excellence – ChiNu, for a malnutrition free India: *with Centre for Technology Alternatives for Rural Areas (CTARA), IIT Bombay*. Prof.Satish Agnihotri, using NHFS-4 data, stressed on the importance of importance of nutrition initiatives aimed at children at early age to tackle the malnutrition problem.
3. Maternal, Infant and Young Child nutrition: Training of Trainers in Sabrakantha district, Gujarat: *with Shrimati Malati Dahanukar Trust, Mumbai*. Dr. Rupal Dalal showed importance of training of health workers and through them, mothers, to make major impact on child growth in the crucial 1000 days – form conception to about 2 years of age. IIT Bombay Spoken Tutorial videos in addition to face to face and online training can help spread training more.
4. Air activated Self-heating blanket: *NeoWarm from Parisodhana*. Satyanarayana V N T Kuchibhatla, mentioned about their vision to help reduce pre-term baby mortality through their self-heating blanket.
5. Foot operated resuscitation device: *Neobreathe from Windmill Technologies*. Dr.Avijit Bansal described their innovative device for resuscitation of babies which allow freedom for both hands.
6. Niswarth Children Foundation: TBR – Breakfast project for Aanganwaadis: Dr. Snehal Parmar described project to distribute healthy breakfast packets to selected Aanganwaadis with health checks and also health counseling.

### Post Introductory Discussion Key Points:

1. Nutrition initiatives need to be coupled with improved hygiene practices as well as basic medical diagnostic and care, to reduce negative impact of frequent morbidity. Otherwise the children affected by such morbidity will not get benefit of nutrition initiatives. Hence along with nutrition initiatives, building behaviour change for better hygiene practices along with basic medical care initiatives for quick diagnostics and treatment for regular illnesses is a must.

2. For effectiveness of above, high quality IEC material on nutrition and WASH is emphasized and example of such initiative in Surat district was given.
3. Government of India plans to open 1.2 lakh Health and Wellness centres across the country. These will serve as centres for holistic advice for underprivileged communities for all health and wellness aspects including nutrition, hygiene etc. If initiatives like Spoken Tutorials get linked to it, it can create a strong impact. This will enable taking knowledge and best practices, developed by experts and validated through on ground evidence, to the communities in a quick and reliable manner with scope for feedback mechanism.
4. Using traditional systems as encompassed under AYUSH (Ayurveda, Yoga, Unani, Siddha, and Homeopathy), with evidence based scientific validation can help us adapt many traditional health practices to modern needs, and may provide sustainable and effective solutions.
5. Supporting for profit social impact ventures is needed to bring innovations on sustainable and scalable basis to communities and drive social impact.

Mr. Ron Mehta, Executive Director, WIN Foundation thanked the participants for their active participation and reiterated WIN commitment to continue support for purposeful dialogue and collaborative projects in future to achieve the common objective of social impact.



---Thank you ---

WIN Foundation & Kiran C Patel Centre for Sustainable Development, Indian Institute of Technology Gandhinagar