India WASH Forum

WASH News and Policy Update
Bi-monthly e-Newsletter of India WASH Forum
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India WASH Forum News

India WASH Forum stands for an independent credible voice in the water, sanitation and hygiene sector. WASH News and Policy Update is a bi-monthly e newsletter of the India WASH Forum. It is an open platform for engagement on contemporary issues in WASH sector in India and elsewhere.

We are conscious of the need to engage with and understand other larger debates in the social and economic development scenario, of which drinking water and sanitation is a part. Hence we include in our news analysis and policy updates, events and developments from other related development fields, besides the WASH sector. We invite readers to share their experiences and reports that can be disseminated from this WASH Policy Newsletter.

Global Sanitation Fund is now operational in 1100 revenue villages of Jharkhand and has been able to promote zero cost toilets using the CLTS Approach in more than 238 villages of nearly 150 Gram Panchayats. The programme is now poised to start operations in Bihar in the coming months with atleast 9 new NGO sub grantees.

The Environmental Law Research Society had brought out four well analysed Policy Papers:

- Drinking Water Regulation: Rethinking Right to Water
- Realising the Right to Sanitation in Rural Areas: Towards a New Policy Framework
- Ground water Regulation in UP –Beyond the 2010 Bill
- Water Regulatory Authorities in India –the Way Forward?

These can be accessed on their website
http://elrs.in/user/login/loggedin.php

In this issue of WASH News and Policy Update, **on the occasion of International Womens Day, we share with our readers the summary of the important Jagori study on Gender and Sanitation**. The study is perhaps the only one of its kind in India in the recent past that has placed sanitation in a gender perspective and not in a limited women and sanitation slot. Undertaken in the slums of Delhi in 2009-11, the study arrives at conclusions that are very useful for practitioners in WASH programmes. While poorly maintained common toilets in slums are a common concern almost everywhere, some of the findings of the study are eye opening for WASH programmes;

- Household chores spill over into the streets and drains – the public private spheres merge and create several challenges for the women
- Impediments to movement in the smaller lanes – compromised dignity/privacy
- Inadequate maintenance of toilets, user fees and confused governance mechanisms
- Delhi, in FY 2011-12, Rs. 9 crores had been spent on water supply and Rs. 24 crores on sanitation facilities for JJ clusters, which amounts to a mere Rs. 30 on water supply and Rs. 80 on sanitation per JJ colony resident for the year 2011-12.

Resistance to the PPP for Delhi water privatisation is growing in Delhi. We include a letter written by Shri Rajinder Sachar to the Delhi Chief Minister, highlighting the inconsistencies in the three PPP contracts that the Delhi Jal Board is about to sign with private companies.

We fail to understand the logic for the 3 PPPs, given that the Government/DJB will;

- Provide 70% of all new capital investments required for the PPPs (as JNNURM and State government share)
- Provide a 15% rate of return on capital investment (30% capital investment for new infrastructure) of the private operator,
- Hand over the use of its existing assets free of cost to the private operator
- "DJB bearing 20% of the existing cost for rendering supervision and related services for the project"
- Sewer operations and maintenance to be DJB responsibility
- Free Raw water as subsidy to the private operator by DJB
- No provision for stringent penalties and fines, including revocation of Contract of Private operator before 12 years, in case of inadequate service provision or failure to maintain equity in water supply.

We see the 3 PPP models as precursors to privatisation of the DJB, with the government squandering the tax revenues to prop up private agencies, with no concern for equity of water supply and sanitation as a human right.

We share information on Auroville's **'AuroAquasafe' as Point-of-Use purifier for treatment of contaminated water at home.**

We bring a short report on the Ahmedabad Workshop on **Urbanization, Water Management and Human Health.** Dr. Saravanan emphasized that the research is ongoing with prospective survey among selected households (Sep 2012- Feb 2013) still to be completed, which will throw light on the socio-behavioral characteristics of the individuals, and specific factors influencing the incidence of diseases. The year 2013 will be primarily committed to analyzing the information (quantitative and qualitative) collected across different scales (individuals-households-ward-city) and using diverse spatial and statistical analytical tools.

Behaviour Change Communication in WASH continues to be a dark area in sanitation and hygiene work in India and elsewhere. Using Bollywood Filmstars as Brand Ambassadors, Cricketers and expensive campaigns using celebrities – has not yielded results, yet more and more funds seems to be spent on approaches that Beyond knowing what does not work, there seems to be very few examples of successful large WASH programmes with comparable studies on the effectiveness of different BCC approaches in WASH. WSSCC has come out with a good compilation of all the different Sanitation and Hygiene Software Approaches/Frameworks/Programmes.

Culled out from a LinkedIn Group Discussion in the Community of Practice on WSSCC, discussion has stimulated valuable insights into the theory and practice of Behaviour Change Communication by learning from a diverse field of Development Programming in Health and Education, Communications, Brand Building, Marketing and Social Sciences.

All approaches that contribute to improving sanitation and hygiene are welcome. One is however worried at the way commercial marketing approaches and CLTS are dominating the BCC approaches and cornering budgets. Effectively crowding out all the other programming frameworks and approaches - please see the WSSCC publication. No one is saying that do not innovate and make good designs of toilet pans and toilets that make it attractive for people to identify with as modern lifestyle appeal. Please do invest in good attractive designs that also save water and effort in cleaning. This is being done in India with the toilet pans we produce. Despite modernisation, media outreach - we are still faced with the fact that people do not want toilets or practice hygiene. Is it only because we are not giving them a product that does not meet their aspirations of lifestyle and fashion?

Does BCC in sanitation and hygiene always need to be linked with selling some product - soap and saniplast pans? Hand washing with ash is as good as hand washing with soap. What about promoting breast feeding that does not have a product marketing potential. Is it impossible to promote improved behaviours without linking it to commercial product marketing?

Our work in social development programmes informs us that there could be deeper barriers, that prevent people from adopting improved hygiene behaviours. Not everywhere and in all contexts, but in most cases. We should atleast try to investigate and find out. Good designs of toilets and hand washing platforms can compliment this understanding, not replace its need. A recent BCC Formative Research on Hygiene - http://www.irc.nl/page/68626 highlights the importance of understanding barriers to hand washing behaviours arising from peoples perception of their self worth and from their sense of dignity of working with their hands, not out of knowledge gaps.

In this discussion we also tried to highlight why community empowerment approaches are equally effective in promoting BCC in WASH. And why they fail - when they become sterile information, education and awareness extension service delivery approaches - devoid of any empowerment content. Why these cannot be scaled up in large government programmes - because they cannot handle sensitive issues of caste and class inequalities and peoples understanding of their self worth and position in society - is difficult to speak openly in a government programme.

Just as there are instances of failures of community driven BCC approaches, there are many failures of commercial marketing BCC approaches as well. Increased soap sales automatically do not imply improved hand washing. Many commercial marketing approaches rely on government subsidies and end up dumping the products in fake sales marketing ventures.

We also discussed the pitfalls of having celebrities as brand ambassadors - imagine a south India film star trying to promote anti tobacco and liquor campaign in Switzerland or USA!! Why do we then assume that film stars of hindi cinema in India can reach remote rural areas where they are not as popular as local film stars. The discussion therefore is aimed at trying to critique different approaches and avoid the pitfalls of taking shortcuts to promote one approach.

You can sell anything that people do not want – Coca Cola or Liquor – by the power of commercial marketing and advertising. This power is not just about the power of ideas, it is backed by the power of advertising budget spends and other promotional budgets that are huge. In an interesting conversation with an ex Pepsi marketing professional, he said that coke and Pepsi never Evaluate their advertising campaigns to find out how they have worked on the consumers mind and what attribution have they made to sales vis a vis their competitor's advertising. They find this a waste of money to do. Increased coke sales are adequate measure of success of coke advertising. But it is not just advertising with celebrities and jingles that contributes to increased coke/pepsi sales. He said there is a second component, promotional monetary incentives for retailers - to promote Pepsi and not other soft drinks, that also contributes to increased sales. If sales increase, he said it is not possible to distinguish which contributed how much to increasing the sales - promotional incentives to retailers or the advertising!!

While Coca Cola will keep selling happiness in the form of useless coke, with both advertising and promotional budgets, will we be able to match it with our BCC in WASH advertising budgets to sell happiness in hand washing?

Should we even try this? Even in terms of power of ideas, it is Coca Cola that has learnt about human behaviour and social change from Maslow, sociology and psychology disciplines in huanities, and from social movements - on how to sell coke using popular symbolisms and values of change and energy, youth market segmentation - to make people buy Coke as a proxy for becoming happy/modern/stylish. Hence it will be sad if we now have to learn BCC in WASH from Coca Cola and not from the humanities, social sciences and mass movements, from people themselves

The entire thread of nearly 70 discussion entries till date can be viewed on the following link - http://www.linkedin.com/groups?gid=1238187&trk=hb_side_ghttp://www.linkedin.com/groups?gid=1238187&trk=hb_side_g

Privatisation of Delhi Water and Sanitation Services – Letter to the Chief Minister from Water Privatisation Commercialisation Resistance Committee

28th Jan 2013

Dear Smt. Sheila Dikshit ji,

Sub: Regarding PPPs in Water Supply, Water Privatisation and Price Hike by the Delhi Jal Board (DJB)

Set out below are key issues that require your immediate attention.

We as citizens of Delhi are concerned over **poor access and quality of water supply services especially to the slums and unauthorised colonies** of Delhi.

- We are concerned over the **400% hike in DJB water tariffs in 2010, along with a totally unjustified automatic 10% pa increase** in water bills. **We believe this tariff hike has been introduced along with the 3 PPP projects with a view to making water an attractive business opportunity** for Indian and foreign corporates and to privatise the water and sanitation services of Delhi in the near future.
- **The 3 PPP projects with private operators, are being sold as a magic bullet for the problems**

of poor quality services of the DJB. We wish to draw your attention to the experience of France where re-municipalisation of water services has been done in some cities, the ban on privatisation in the water sector in Netherlands and a national referendum on Right to Water in Uruguay in 2004 voted for making Right to Water a Constitutional Right. "By an almost two-thirds majority, the people of Uruguay voted to amend their constitution to ensure not only that access to piped water and sanitation is a fundamental human right available to everyone, but also that in the creation of water policies social considerations take precedence over economic considerations. Further, the constitution must now reflect that the "public service of water supply for human consumption will be served exclusively and directly by state legal persons" - that is to say, not by for-profit companies".[1]

- We are concerned over the increase in tariffs by the DJB in the last 3 years. Water and sanitation are recognised as Human Rights by the UN Declaration of July 2010 to which India was a signatory. **Yet in 2010 the "life-line water tariffs" in the DJB tariff slabs for the lowest water consumption household slab were abolished.** It needs in this context to be emphasised that water and sanitation are recognised as basic human needs and **as a Fundamental Right under Article 21 of the Indian Constitution.**
- We had **first written to you on 31st Oct 2012** raising some basic questions;
    - **Is there a real shortage of water supply in Delhi or is this a result of unequal distribution of water in different parts of the city?** If there is a real shortage of water, the proposed 24x7 supply in **3 PPP projects will take away water from other areas of Delhi** and therefore, should not be attempted without first ensuring equal distribution of available water to all areas of Delhi, including the slums and unauthorised colonies.
    - **If claims of 50% and more water wastage (NRW) are true, then Delhi would be waterlogged/flooded today**. But instead water tables are declining in most parts of Delhi. Hence we believe it is not quite correct to define water wastage as a key issue in Delhi.
    - **On what basis has Non Revenue Water(NRW) been calculated for Delhi**? Does it include water being supplied to slums and unauthorised colonies as a social obligation and human right, and not being charged currently? Will reduction in NRW mean a false sense of efficiency gain, resulting in poorer section of Delhi paying more for water?
    - **What are the inadequacies in the current DJB managed water supply and sewerage systems: Why can these not be taken care of by the DJB?**
    - **Why has the government deliberately neglected the DJB and not invested in improving its service delivery capacity**? **Why has the DJB become a contract awarding agency** with some estimates saying that nearly 50% of its works are contracted out to private agencies today?
- In many **unauthorised colonies and slums of Delhi, DJB does not have piped water supply. Private contractors and water mafias control drinking water supply and charge high rates for tanker water supply. New resettlement colonies by DDA like Savda Ghevra, do not have provision for household toilets and drainage.** This results in people being forced to use poorly maintained common toilets and pay for usage. The priority for DJB should be to ensure piped water supply to all residents of Delhi, instead of the PPP and privatisation initiatives.
- We are concerned over poor quality of water services and high water tariffs of DJB**, as well as the privatisation attempts being enforced on the DJB, by the Delhi Government and the Planning Commission of India.** The response we received to our letter, from the CEO of the DJB on the 11th Nov 2012, was oriented towards PPPs. It assumed that PPPs:
    - Enhance service standards
    - Improve water quality
    - Provide better consumer services
    - Extend piped water supply to unserved areas
    - Move from intermittent water supply to 24x7 water supply
- The DJB in its response seeks to suggest that under the PPP projects;
    - Private operators will be engaged for a limited period of 12-15yrs to bring in technical, commercial and operating efficiencies

[1] http://www.blueplanetproject.net/documents/RTW_handbill.pdf

- Ownership of all assets and revenues will be with the DJB
- DJB will continue to be ultimately responsible for service delivery by operators
- All PPP contract documents are uploaded on the DJB website

- We would like to bring to your notice the following important considerations :
  - **Having effected a massive increase in water bills in 2010, isn't the DJB facilitating the privatisation of the DJB through these pilot PPPs?** In addition to the tariff increase, a 10% annual tariff increase would not have been possible under privatisation/PPP. The DJB is therefore appears to be setting the ground for privatisation.
  - **Why cannot the DJB make the improvements in water and sanitation services without the PPPs?** What are the reasons for the so called poor technical, commercial and operating efficiencies of DJB, why cannot these be set right?
  - **The reason for outsourcing of works by the DJB is unexplained and cannot be justified as a reason for PPP contracts to be given out now**. We seek to know the proportion of DJB work contracts that are being given to private contractors since 1998 (when DJB was formed), to understand the trend of this *de facto* privatisation of DJB that has been put in place.
  - **DJB claims that it will remain owner of all assets under the PPP projects. However, the issue is not about ownership alone, but about control and the need for treatment of water as a public good and not a private commodity.** The private operator will control the city's water supply and decide who gets water and in what quantity.
- **In the name of improving efficiency and cost reduction, we believe, privatisation will only serve the interests of the private operator and bring misery to the citizens of Delhi by inflating their bills.** Under the PPP arrangement, fees of the private operator, called Net Operator Rate (NOR), calculated on volumetric basis for water supplied, will be paid by the DJB. **The DPRs of the 3 PPPs show that the increase in water tariffs by DJB since 2010 are enough to ensure full cost recovery to take care of the NOR of the private operator and the DJB share of expenses. DJB will provide free raw water and all its existing assets to the private operator. In return, all that the private operator has to do is to increase the billing. Since the private operator is not in-charge of water supply, it can always blame the DJB for not being able to provide enough water to ensure 24X7 service delivery at the consumer door step but only at the District Metered Area (DMA) level for each PPP. DJB retains responsibility for managing the excess sewerage discharge**. Thus the equity arrangements in the PPPs are weak in not non-existent.
  - For example in the Malviya Nagar PPP, the DPR shows that the existing cost of water supply for the DJB is low at Rs.8.54/KL. The projected revenue under PPP shows an increase from Rs.68 million in 2009-10 to Rs.136 million in 2010-11. This will be a result of increased water quantity billed as well as a 100% average water tariff hike from Rs.7.56/KL to Rs.15.14/KL in 2010-11. The volumetric payment to the private operator (NOR) is expected to be Rs. 7.38/KL. **We fail to understand the logic of the PPP – is it to make profits by inflating bills or is it to serve the people of Delhi? If higher income groups pay a high slab rate for DJB water tariffs, then this should be done with the social aim of subsidizing the poor and not for subsidizing the private water business operations, as is being done under the PPP arrangement.**
- **The 3 PPPs whose information** (Detailed Project Reports) is on the DJB website, shows that it costs the DJB Rs.8.95/KL to supply water in Delhi[2]. We are intrigued to see the Rs.28/KL/month cost of water and sanitation services that DJB quotes in its domestic water bills since Sept 2012.

- The DPRs of the Pilot PPP projects show that **the areas shortlisted for PPPs are such that profits can be generated easily;**
- **The Malaviya Nagar DPR** shows that as high as 80% of the 32,000 water connections in Malaviya

[2] Nangloi DPR, Page 180

Nagar[3] fall under the DJB Tariff Slab for Mixed Consumer Category. The Mixed Consumer Category includes households with some commercial establishments, are charged twice the water tariff as compared to the Domestic Category consumers. The Malviya Nagar DPR also shows that water connections can be almost doubled. Secondly, currently 40% water is supplied from bore wells and by tankers[4]. This entails a high pumping cost and reduced revenues. When DJB supplies free raw water to the private operator under the PPP arrangement, this cost of operations will be eliminated. Thereby revenues of the private operator will show a dramatic improvement *vis a vis* the DJB prior to privatisation. This increased efficiency of the private operator therefore would be facilitated in a substantial measure, by the free supply of raw water and increased water tariffs already put in place by the DJB. With very little capital investment for new infrastructure (Rs.143 crores, out of which only 30% is to be paid by the private operator), the project offers the most attractive cost-benefit options and is like a 5 Star Public Sector profit making Undertaking being given away for PPP projects.

- **The Vasant Vihar DPR for Service Improvement** (part of the Mehrauli PPP) is in a high income locality of Delhi. The project serves only about 70,000 of the population consisting of 9500 connections. It will result in improved water services for only about 6900 connections, with the rest being supplied bulk water. The DPR does not provide any estimate of NRW and how this will be reduced. The project infrastructure capital cost is only Rs.32 crores. **The DPR states that revenue surplus can be generated, provided the bulk raw water volume is made available to the private operator.** Hence it is clear that this project is already viable if DJB were to manage it.
- **The Nangloi DPR shows that the project already operates at a higher efficiency level.** The average cost of water supply of DJB for Delhi, is higher than cost for Nangloi. The average revenue/tariff of the DJB is lower than the revenue generated in Nangloi. The PPP project has a large operational coverage of 12 lakh people and currently operates in an area with only 47% water connections. It requires a staggering Rs.687 crore infrastructure investment. **Paying 15% assured rate of return on the share of private capital investment, will amount to a staggering annual interest burden that the private operator will recover in its fees.** The DJB has a business logic of trying to increase revenues by bringing in a large number of consumers under its existing high water tariffs slab, with no concern for equity and capacity to pay for in this outer Delhi residential area. The private operator costs will be far too high. The Delhi government could perhaps have given 100% grant for improving infrastructure with no outflow of 15% return to the private operator for 15 years.
- **The PPP Pilot projects of DJB rely on a host of freebies from the Government to the Private Operators.** This includes;
    - Free supply of raw water, massive government investments in infrastructure in terms of setting up District Metering Areas and Reservoirs for water storage and distribution pipelines and networks prior to privatisation
    - Increased water tariffs of DJB since 2012, including the clause of 10% automatic tariff increase every year.
    - Assured 15% rate of return on capital invested by private operator

    This alone ensures that the private operators start generating profits in a short span of a few years**.**

- **The 3 PPP Pilot projects demonstrate that privatisation is being done where there is a potential for the private operator to make profits;**
    - Higher commercial household connections(Malviya Nagar), servicing high income consumers(Vasant Vihar) whose water demand will be higher and willingness to pay also higher
    - Where large capital investments (Nangloi) will lead to a massive increase in water connections and revenues.
- **Lessons learnt from these PPPs will not provide any meaningful comparisons within the 3 PPPs and for understanding the efficiency gains argument propounded by the DJB**. The PPP Pilot projects have been chosen to propagate success of privatisation to be replicated by the DJB with potentially disastrous consequences if this is applied elsewhere.
- **We fail to understand the logic for the 3 PPPs, given that the Government/DJB will;**

[3] Malviya Nagar DPR, page # 53 shows 26,351 water connections fall in Mixed IA category of consumers.

[4] Malviya Nagar DPR, page # 36 states that 6.25MGD of the 16.69MGD water is supplied from Tuber wells.

- **Provide 70% of all new capital investments required for the PPPs (as JNNURM and State government share)**
- **Provide a 15% rate of return on capital investment (30% capital investment for new infrastructure) of the private operator,**
- **Hand over the use of its existing assets free of cost to the private operator**
- **"DJB bearing 20% of the existing cost for rendering supervision and related services for the project"[5].**
- **Sewer operations and maintenance to be DJB responsibility**
- **Free Raw water as subsidy to the private operator by DJB**
- **No provision for stringent penalties and fines, including revocation of Contract of Private operator before 12 years, in case of inadequate service provision or failure to maintain equity in water supply.**

We see the 3 PPP models as precursors to privatisation of the DJB, with the government squandering the tax revenues to prop up private agencies, with no concern for equity of water supply and sanitation as a human right.

- **We urge the Government of the National Capital Territory :**
    - That the Net Operator Rate of the 3 PPP bidders that DJB will give to the private operators should be made public. We understand that this is a commercial contract item. However, drinking water and sanitation are crucial from a Constitutional and human point of view and this information should be in the public domain for all to see how much subsidy the government is giving to private agencies and how this compares with the revenues and costs of operations of DJB in the 3 areas.
    - A break up of the Rs.28/KL cost of water supply of DJB is needed. What are the components of this costing and why has it been timed with the privatisation initiatives of the 3 PPPs?
    - What is the intended grievance response time of the Private operator to fix problems of consumers? Within how many hours of the day will the complaint be addressed and what are the penalties if any? Why is this not part of the DPRs and Standard Terms of Agreement?
    - We have been assured by DJB that the private operator will provide 24x7 water supply at the consumer household level and not merely at the District Metered Area [DMA] level. Please share with us evidence from the 3 PPP Contracts where this has been agreed to by the private operator. The DPRs are not sufficient for this.
    - What are the penalties for the private operator if it does not supply 24x7 water to residents or maintain equity in supply? Provisions for ensuring equity in distribution of water – including termination of contract if found diverting water to richer colonies and consumers - are not seen in the DPRs. Are they included in the contracts?
    - Can the private operator services be terminated by the DJB before the 12-15 yrs contract on account of poor service provision or failure to maintain equity in supply? What are the provisions if any for regular monitoring and evaluation by consumers of the private operators performance, even , say, once every 3 years?
    - What is the perspective plan of DJB in terms of its Human Resources given the 3 PPPs? How will the existing staff of DJB in the 3 PPPs be deployed when the private agency takes over the operations? Will their costs be covered under the PPP projects?
    - What is the perspective plan of DJB to improve the capacity and strength of the DJB staff for the coming 10 years, so that the institution does not become merely a contract awarding agency? What investments will be made in Operating Systems, MIS and Monitoring and Grievance Redressal Systems of the DJB?
- Why is Service Charge included in the current DJB bills on a volumetric basis, in addition to the slab wise volumetric charges? It makes no sense to have two separate volumetric charges applied

[5] Malviya Nagar DPR page 134

to consumers. The rationale and basis of the Service Charge remains unexplained.

- **Charter of Demands:**

  - **Given the seriousness of issues and in order to fully understand and respond to the concerns of the citizens of Delhi, the Delhi Government should set up a Committee of Concerned Citizens, Experts and the DJB. This committee should be charged with the task of addressing the matters raised in this memorandum and also by other citizens and groups so to arrive at recommendations on the question of both tariff hike and privatisation.**
  - **Till this Committee is able to come up with recommendations based on public consultations, the proposed PPP projects should be put on immediate hold.**
    - **The 10% automatic annual water tariff increase in DJB bills should be immediately withdrawn.**
    - **The "lifeline water tariffs" for 10KL/month/household consumption slab should be restored and this ought to be done to the 2009 tariff levels.**
    - **Water is the basis of life. The water and sanitation needs of the people of India are a Fundamental Right under Article 21 of the Indian constitution, and a State obligation apart from being a Human Right. The State bears the responsibility to the citizens for actualising these Rights and cannot subcontract its responsibility to private companies. This obligation ought to be clearly understood and enshrined in all policy documents of the Government.**

Thanking you,
Yours truly,
(Rajindar Sachar, Retd Chief Justice Delhi High Court)

Gender and Sanitation: Jagori Study Highlights

Jagori had undertaken an action research study in partnership with Women in Cities International, Action India and IDRC (2009-2011) in two resettlement colonies of Delhi. The objectives of the study were to highlight gender gaps in WATSAN services. The key findings of the study indicate serious concerns for women and girls:

- Residents have no land tenure/license
- Inadequate infrastructure: largely communal and not household
- Limited government services/structures
- Fragmented governance architecture, accountability issues and lack of citizenship rights
- Costs of time lost due to long queues for toilets, potable water, irregular supply of water, fetching water, etc.
- Increased stress waiting for darkness for women/girls to relieve themselves
- High costs of WATSAN-related ill health, eating and drinking less
- Higher demands on household work – less time to do other things/explore opportunities
- Household chores spill over into the streets and drains – the public private spheres merge and create several challenges for the women
- Impediments to movement in the smaller lanes – compromised dignity/privacy
- Inadequate maintenance of toilets, user fees and confused governance mechanisms
- No dustbins for menstrual waste either in the lanes or in the CTCs and therefore bury them or burn – both of which seem difficult because:
  - Girls miss school due to dirty or lack of toilets and Menstrual Health Management issues
  - Constant dread in accessing toilets and walking in lanes due to the water, mud and garbage in lanes
  - Despite their poverty, some families are going into debt to build home-based toilets to 'save' girls from harassment and violence.

The key question we were confronted with was what are the social and economic costs of fear and costs of health? The disconnects observed were:

- Fragmented governance and lack of gender sensitivity in policies, plans;
- Cost of sanitation services are very high – no special provisions in local budgets for women (they are always clubbed with children)
- Safety and health impacts are borne by women/girls, and there is meager health care available;

- Lack of community ownership, women's fatigue and unpaid work.

In addition the CBGA study undertaken with Jagori indicated that:

- The per capita opportunity cost (OC) varied anywhere between Rs. 1925 to Rs. 9520 for the unskilled category. Therefore, the time saved by women, due to improved services and better access would invariably translate into economic gains – by means of increased production or quality time for leisure, education, etc.
- Delhi, in FY 2011-12, Rs. 9 crores had been spent on water supply and Rs. 24 crores on sanitation facilities for JJ clusters, which amounts to a mere Rs. 30 on water supply and Rs. 80 on sanitation per JJ colony resident for the year 2011-12.

For more details, the study can be accessed at: http://jagori.org/wp-content/uploads/2010/02/IDRC_Exec_summary.pdf and http://www.womenincities.org/pdf-general/idrc%20final%20internet.pdf.

The handbook on women's safety can be accessed at: http://jagori.org/wp-content/uploads/2006/01/Handbook1.pdf

Why Behaviour Change Communication has Miserably Failed in WASH and What Needs to be Done?

Excerpts from the Community of Practice Discussion Group on LinkedIn.

The entire thread of nearly 70 discussion entries till date can be viewed on the following link - http://www.linkedin.com/groups?gid=1238187&trk=hb_side_ghttp://www.linkedin.com/groups?gid=1238187&trk=hb_side_g

Thorsten Kiefer •Dear all, what an interesting discussion this is! I very much support Bjorn's comments above and disagree with the assertion that there is nothing we can learn from the Coca Colas, Pepsi, and other successful brands. I think it's quite to the contrary. You noted above that awareness is not the problem, that people know the health benefits of toilets and hygiene. That's exactly the point. Most people KNOW that smoking causes cancer, eating red meat is bad for cholesterol and getting drunk damages your brain. Yet people fail to quit smoking, eating meat and getting drunk. Why can't people just change their behavior and do what they know is good for them?

Behavioral psychology distinguishes between different kind of incentives that help establish a change in human behavior: addition of a positive consequence (you get a reward); addition of a negative consequence (ie punishment/penalty); removal of a positive consequence (reward is taken away); removal of a negative consequence.

The most effective incentives to establish a new behavior is through additional positive consequences that the person experiences directly. Say a child washes her hands with soap and gets an immediate reward, i.e. someone giving her a clap on the shoulder and telling her how smart she was. What doesn't work in terms of establishing new behavior is negatives incentives, particularly if those consequences are abstract long-term consequences. So from a behavioral psychology point of view, telling people that handwashing with soap or toilet use will prevent them from getting sick somewhere down the road is not a good incentive.

At another level, if you also look at Maslow's pyramid of human needs and desires, physiological needs like health are at a much lower level than social needs such as status, belonging to a group, the sense of being stylish and modern that Bjorn refers to, which have a much bigger effect on human behavior. So what can we learn from Coke or Pepsi? Drinking Pepsi and Coke makes people feel good about themselves. To most people, washing hands with soap still is a boring duty they'd rather skip. I think we can learn from these brands how to combine direct positive incentives with communication that appeals to higher level human needs and desires so sometime down the road people wash hands not because they have to stay healthy, but because they want to feel good.

Augustine Otieno Afullo •We all behave somewhat in unique ways guided by whether we believe the behaviour in question is appropriate (law of appropriateness) or whether we believe there are consequences to the behaviour (law of consequences), and the consequences are dire enough- sometimes call the rationalistic theories or school of thought. Appropriateness is inbuilt in us as part of a wider culture- and socialisation. What is acceptable in one culture may not necessarily be in another. Even within a culture there ay be subtle variations. So at any given time, we need to understand the behavioural motivation of each population we are targeting. it cannot be blanket message and uniform approach.

Depinder Kapur Augustine, Thorsten, Sastry, Kay, Bjorn, Simon, Aaron, Ismail, Hossain, Sundar, Elias, George, Sarma..... thanks for joining in and presenting your arguments so clearly. Its great to have a serious

discussion lasting a month on this issue, more than 15 people or 10% of this closed Linkedin group responding, that too without any promotional agenda. Good to see that we are now talking of Maslow, socialisation theory and not advocating short cut copycat solutions to BCC in WASH. Our differences I believe arise from two broad BCC in WASH Approaches/Frameworks we seem to be debating here – Empowerment vs. Commercial marketing Approaches.
I believe we all agree substantially on the following core issues that we have been discussing since the last month;

- Knowledge and information gaps of sanitation and hygiene behaviours, may not be good starting point for BCC in WASH. In other sectors like health or gender development, there can be awareness gaps as a starting point for BCC. Formal community approaches to BCC in WASH and other sectors, focusing on information and knowledge gaps, tend to become boring messages on teaching people to change hygiene behaviours are unlikely to succeed in communicating and affecting a desired behaviour change in WASH.
- Copying commercial marketing approaches may also fail. This happens when BCC messages use consumer culture framework of mass marketing and advertising. When we put ourselves as proxy consumer audiences and not the remote rural or slum communities. When we assume what works for us when we buy coca cola, should also work for everyone else. When we only rely on filmstar celebrities, songs and jingles, and posters as BCC materials – that have failed again and again in WASH campaigns.
- BCC is cultural, social and economic context specific. It has to connect with people, with their own self worth and esteem as individuals and communities they come from(and this is not a homogenous consumer category). Their aspirations and desires. If this is captured in the BCC messages, packaged in positive re enforcing incentives and coordinated with actions on the ground(that is quite unlike an advertising campaign), lead by common people and their role models - teachers, doctors, etc. – likelihood of success are higher.

Depinder Kapur •You can sell anything that people do not want – Coca Cola or Liquor – by the power of commercial marketing and advertising. This power is not just about the power of ideas, it is backed by the power of advertising budget spends and other promotional budgets that are huge.

In an interesting conversation with an ex Pepsi marketing professional, he said that coke and Pepsi never Evaluate their advertising campaigns to find out how they have worked on the consumers mind and what attribution have they made to sales vis a vis their competitor's advertising. They find this a waste of money to do. Increased coke sales are adequate measure of success of coke advertising. But it is not just advertising with celebrities and jingles that contributes to increased coke/pepsi sales. He said there is a second component, promotional monetary incentives for retailers - to promote Pepsi and not other soft drinks, that also contributes to increased sales. If sales increase, he said it is not possible to distinguish which contributed how much to increasing the sales - promotional incentives to retailers or the advertising!!

While Coca Cola will keep selling happiness in the form of useless coke, with both advertising and promotional budgets, will we be able to match it with our BCC in WASH advertising budgets to sell happiness in hand washing?

Should we even try this? Even in terms of power of ideas, it is Coca Cola that has learnt about human behaviour and social change from Maslow, sociology and psychology disciplines in huanities, and from social movements - on how to sell coke using popular symbolisms and values of change and energy, youth market segmentation - to make people buy Coke as a proxy for becoming happy/modern/stylish. Hence it will be sad if we now have to learn BCC in WASH from Coca Cola and not from the humanities, social sciences and mass movements, from people themselves.

Puneet Srivastava •This is a very important question and some systematic study is required to find answer to this question and pointing way forward.
In my experience , the BCC in India has failed to understand indian ethos and culture and is mostly based on western perceptions of Hygine and Sanitation.This area has been historically led by bilateral and multilateral agencies in India and they all came with a western understanding of these issues.There has been little investement from GoI or State Governments to undertstand the absorption and reach of such BCC programmes in WASH.

This is a high time that we challenge ourselves with defining the hygiene and sanitation standards as per indian ethos and cultures.I trust that we have a much better standards of hygiene and sanitation as suited to our climate and our people as indians and once we center our BCC messgaes and efforts around those, the outreach and impact these of these programme will maximise.

George Odhiambo •Thanks Puneet, from my point of view I am of the opinion that we graduate from BCC to a more intense and rigorous approach. Behavior change communication basically seek to address outward act. I believe it is high time we deal with perception and attitude change communication. Through this route we are able to address underlying cultural beliefs, formed attitude and perception that pause as barriers towards the realization of any desired behavior. It is important to note that our behavior are influenced by our formed attitudes and the only way to change a behavior is really work on attitude.

Hygiene: How Myths, Monsters, and Mothers-in-Law can Promote Behaviour Change
V. Curtis: Excerpts from article

A primary finding from our studies of hygiene motivation around the world is that hygiene behaviour appears to be universal in human beings, and driven by factors other than wanting to avoid disease. As African mothers told us 'Everybody wants to be clean'. Nobody likes dirt as it is unattractive, disgusting and stigmatizing.

Mary Douglas, regarded as the 'mother' of social anthropology, is famous for having said that dirt is matter out of place. She said that dirt avoidance is a process of tidying up, 'ensuring that the order in external physical events conforms to the structure of ideas.' She suggested that human societies need organizing principles to function effectively. Substances or practices that challenge that order become 'matter out of place' and are classified as dirt and thrown out (viz rubbish and the 'dirty' old man).

Marketing science also offers important lessons about promoting hygiene. Most important is the consumer focus. I learnt an important lesson when I visited Hindustan Lever in Bombay. I assumed that what they did was to develop technically efficient hygiene products and then go out and sell them. But I was wrong; it works the other way round. They go to consumers in the field and ask what they want from a cleaning fluid, for example. If consumers say they want a product that is browny-yellow, thick, smells of phenyl and foams in a bucket then the laboratory designs a product that is browny-yellow, thick, smells of phenyl and foams in a bucket. A hygiene behaviour, like a hygiene product, has to be sold on the basis of emic knowledge about what motivates the consumer, or it will fail.

So if people everywhere value hygiene and cleanliness, and this is not primarily for reasons of good health, why are they hygienic? What drives people to behave hygienically? Samples of people from countries, including the Netherlands, the U.K., Africa and India and in an international airport were asked to describe the things that disgusted them. The list from the Netherlands included: faeces, hair, vermin, vomit, dust, sweat, stickiness, offal, fish, fishmongers' hands, cats, dogs, dog hairs, dog saliva, rotten waste, bad smelling food, food leftovers, worms, flies, aphids in lettuce, pollution, drug users, drunkenness. A similar list was obtained from the U.K.: faeces, dog and cat faeces, dog diarrhoea, vomit, wounds, wounding an old lady, maggots, a sweaty person, body parts in jars, stained toilets, a stained kitchen, a dead sparrow, rotten food, mouldy food, a rank smell of old grease, foul language, dirty nails, drunks, drunken louts, rude behaviour, like a hygiene product, has to be sold on the basis of emic knowledge about what motivates the consumer, or it will fail. people and eating with the mouth open. Also, being in a dirty hotel where they did not dare put their feet on the carpet, a dirty cafeteria, a dirty play area, a man beating a woman and cruelty to a horse, were all seen as disgusting.

A very similar list was obtained from India: faeces, urine, toilets, sweat, menstrual blood, spilt blood, cut hair, the impurities of childbirth, vomit, the smell of urine, open wounds, saliva, dirty feet, eating with dirty hands, food cooked while menstruating, bad breath, a smelly person, yellow teeth, nose picking, dirty nails, clothes that have been worn, flies, insects, maggots, lice, mice, a mountain of curry, lizards, flies on faeces and liquid animal dung.

So it seems that the key motivating factors in different countries for hygienic behaviour are: nurture, disgust, aesthetics, order and status. Figure 2 shows the model that we developed for changing hygiene behaviour. Behaviour can be changed if the motivating factors are engaged (the springs in the model).

What does putting the emic and the etic together mean in practice? How can we use these insights to design better interventions? To design an effective hygiene promotion programme we need to be able to combine them. In our work we have developed a model approach for formative research prior to designing an intervention. The approach is relatively straightforward. We carry out a short qualitative and quantitative study designed to answer the following four questions:

- What are the risk practices?
- Who should be the target audiences?
- What can motivate a change in practices?
- How can we communicate with target audiences?

A full-scale communications programme to reach all the mothers and childcarers in a West African town of a third of a million people, using local positive motivation for hygiene (aesthetics and social status) and employing both

traditional and modern channels of communication, succeeded in significantly improving hygiene behaviours in the target group. Handwashing with soap observed after cleaning a child's bottom rose from 13% to 31% and soap use after using a toilet went from 1% to 17% over the 3 years of the programme.

I submit that using this sort of approach, which employs a multifaceted understanding of hygiene and learns from marketing, anthropology, biology as well as health science can be very effective. We can find out what the consumer wants and why and then design programmes tailored to people's needs, and at a reasonable cost.

We all have predispositions to behaviours and we do not always act purely on rationality. Germs are not the only issue when wanting to change behaviour: we will need to motivate and facilitate to create an environment where behavioural change is encouraged, and to find ways of changing existing habits. Effective programmes need to be based on formative research into who the consumer is, what the consumer wants and does, and what she/he can do in the household.

National Sanitation and Hygiene Advocacy and Communication Strategy Framework for 2012-2017 of India

To accelerate the process the Ministry of Drinking Water and Sanitation (MDWS) along with UNICEF and other partners have developed the National Sanitation and Hygiene Advocacy and Communication Strategy Framework for 2012-2017. The overall goal is to make sure that people have access to, *and use a toilet* and practice good hygiene, including handwashing with soap after the toilet and before food. The strategy focuses on increasing knowledge and perceived importance of sanitation and hygiene practices, with the long term objective of changing the way society thinks so that open defecation is no longer acceptable in India.

The Advocacy and Communication Strategy focuses on **four critical sanitation and hygiene behaviours:**
1. Building *and* use of toilets,
2. The safe disposal of child faeces,
3. Handwashing with soap after defecation, before food and after handling child faeces,
4. Safe storage and handling of drinking water.

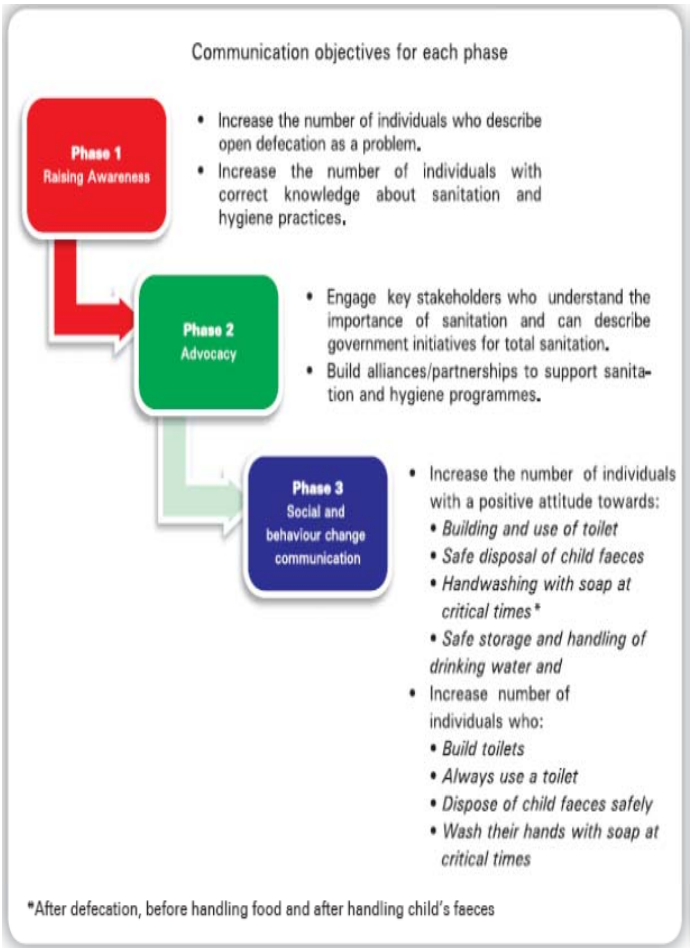
The Communication Strategy is divided into **three phases**, each with specific communication objectives. It clearly defines,
„. The audience receiving the information (the who);
„. The content of the information (the what)
„. The methods to be used to convey the information (the how); and
„. The approaches to promote action for change (the action).

This is ***achieved through advocacy,*** **interpersonal communication and community mobilisation with overall multi-media support including mass media, digital media and social media**.

The Strategy focuses on
The immediate need for individuals adults and children, men and women to change existing perceptions about the importance of sanitation and hygiene practices, and

The long term need for the whole of Indian society to agree that it is *not socially acceptable* to practice open defecation, handle child faeces, ignore handwashing with soap or store and handle drinking water inappropriately.

It is only a change in individual practice coupled with a change in the social norm that will bring about a positive change for everyone.



Background Note and Agenda for the One day Workshop of the State Secretaries Incharge of Rural Water Supply and Rural Sanitation 26th September, 2011
Tagore Hall, Scope Complex, Opposite CGO Complex, Lodhi Road New Delhi

http://indiasanitationportal.org/sites/default/files/Ministry%20of%20Drinking%20Water%20&%20Sanitation%20Agenda%20for%2026th%20sept%20meeting%202011.pdf

Information, Education and Communication (IEC)
Total Sanitation Campaign (TSC) emphasizes on Information, Education and Communication (IEC), Human Resource Development and Capacity Development activities to increase awareness among the rural people and generation of demand for sanitary facilities. TSC focuses on community led and people centered initiatives**. Upto 15% of each district project outlay can be utilized for IEC activities** aimed at generating effective demand for toilets and spreading hygiene education.

IEC is an extremely important component of the programme that should lay the basis for successful implementation of TSC. IEC has to inform, educate and persuade people to realize their roles and responsibilities, and benefits accruing from adopting right practices. It should take into account the barriers related to infrastructure, socio–cultural practices and traditions. Defecating in the open has been an age old practice that appears to be the right behavior to many people in our country. This can be eliminated only by changing the mindset of people through an intensive IEC strategy in a campaign mode. The focus of communication activity should be on awareness, sensitization and motivation of people to follow the right hygiene and sanitation practices.

Contents of IEC Campaign
The IEC activities should be area specific, involving all residents of the area. IEC is not a one- time activity but an ongoing process that has to be implemented not just to create demand but also for usage, maintenance and up-gradation of facilities so that sanitation and hygiene become ingrained habits.

The purpose of a targeted awareness campaign and communication strategy is to ensure that the stakeholders are aware of the issues surrounding hygiene and sanitation using evidence, capacity building and policy influencing. An effective strategy requires a clear definition of the primary and secondary audiences, the content of the information and the methods to be employed to convey the information. It is important to fully understand the key stakeholders as well as to define the audiences as specifically as possible.

The key stakeholders are as follows:
State level: Political leaders and other figures of public eminence, State Water and Sanitation Mission, Water and Sanitation Support Organizations/ Communication Capacity Development Unit (CCDU), Key Resource Centre (KRCs), Support organizations and Media.
District level: Presidents and members of District Panchayats, District Collectors, District Water & Sanitation Mission, District
Block level: Block Panchayat Samiti President and other members of the Block Panchayat, Block Development Officer, Officials of Women and Child Development, Health and Education Departments, NGOs , CBOs etc.
Village level: Gram Panchayats, Village Water Sanitation Committee (VWSC) /Village Water Health & Sanitation Committee (VWHSC), School children, Teachers, Social workers, religious teachers, local political leaders etc, Anganwadi & Health workers, Non Government Organizations, Community Based Organizations(CBOs), Self Help Group (SHGs), Youth groups from NSS, NYK & Bharat Scouts.
Identification of stakeholders/partners who are to be focused upon for behaviour change is the initial step that must be undertaken so that the IEC campaign can be planned and aimed at the right target audience.
Primary: Children, adolescents (especially girls), youth, women, men, differently-abled & elderly persons
Secondary: Elected representatives (MPs, MLAs), PRIs (Presidents of District, Block and Gram Panchayats, other members of the elected local bodies), District Collector, Government officials, Block Development Officer, District Water and Sanitation Mission/Committee (DWSC), Village Water Sanitation Committee (VWSC) / Village Water Health & Sanitation Committee (VWHSC), Block Resource Center (BRCs), Public Health & Education Department (PHED) officials, natural community leaders, Nehru Yuva Kendra and other youth organization members like NSS and NCC, Women's Self Help Groups, social workers, community based groups, Non- government organizations etc. Grassroots staff of National Programmes such as ICDS, NRHM, SSA, MDM etc.

List of activities are as follows:
District Level
1. Each project district should prepare a detailed IEC Annual Action Plan by February of the preceding financial year, with defined strategies to reach all sections of the community.
2. The Annual IEC Action Plan should be duly approved by the District Panchayat (or the DWSM where such bodies are not in existence).
3. Identification of good local institutions like NGOs, CBOs etc.

4. The Communication and Capacity Development Units (CCDUs) and Water and Sanitation Support Organizations (WSSO) set up at the state level must support the districts in developing a good IEC plan and also in implementing it.
5. Communication material developed must be periodically evaluated and impact assessment may be done through third party agencies to assess the effectiveness of the communication activities in terms of quality and quantity.
6. Engagement of Swachchhata Doot may be undertaken by DWSM in all the GPs as per the terms and conditions mentioned in the Guidelines issued by the Ministry of Drinking Water and Sanitation.
7. Preparation of Training Calender of school teachers, ANM, Asha & AW workers.
8. Celebrating National and International days such as World Toilet day (November 19th), Hand Washing day (15th October or as modified), Environment day (June 5th), etc.;
9. Organizing essay and elocution competitions on health and hygiene among school children, awarding schools with best health and hygiene condition at State, district and block level.
10. Messages printed on inside and back cover pages of free textbooks and notebooks.

Block Level

1. Visiting schools to deliver talks to sensitize teachers and students to adopt improved hygiene practices and improved sanitation,
2. Taking up of awareness generation and development communication activities among GP and VWSC members and village community.
3. Conducting training courses at block and village level for members of VWSCs and GPs and other grassroots level workers in the village (Swachchhata Doots, ASHA worker, Anganwadi worker, school teachers, pump operators, hand pump mechanics, motivators
etc.) on various aspects of water and sanitation.
4. Preparing an Annual Training Calendar and Annual IEC Activities Plan and upon
approval from DWSM shall be responsible for its implementation.
5. Helping the GPs/ VWSCs in baseline surveys and sanitary survey;
6. Helping the village community/VWSCs/GPs in preparation of their Village Action Plan and its approval by the Gram Sabha,
7. Guiding VWSCs in implementing and monitoring the works related to sanitation as
envisaged in the Village Action Plan,
8. Interacting regularly with Panchayats, Swachchhata Doots, ASHA workers, anganwadi worker, para-medical staff of Public Health Centers, schools etc. to ensure that issues relating to sanitation get regular attention;
9. Helping in conducting social audits
10. Helping the village community in formation of VWSCs in all villages.

Gram Panchayat level

1. Door to door campaign by community leaders, panchayat members, Swachchhata Doots etc on the importance of construction of toilets and inculcating good health and hygiene practices.
2. Regular discussions in Gram Sabha, VWSC and other public gatherings, with focus on active involvement of marginalized groups like SC, STs, women and minorities
3. Sanitation and Health Padyatras (Transect Walks) especially for women and children.
4. Street theatre, Kala Jathas, street plays, folk songs folk artists for awareness generation.
5. Shramdan in schools on weekly basis under supervision of teachers. Shramdan activities like cleaning of water sources, water collection utensils, cleaning of school campus and cleaning of institutional and community sanitation facilities.
6. Taking up issues relating to sanitation and hygiene on important identified days in schools and during functions in GP.
7. Panchayats must evolve a self regulatory monitoring system to ensure that there is no open defecation in their village.
8. Gram Panchayats, Parent Teachers Associations, Village water and Sanitation Committees to monitor cleanliness in school premises and toilet blocks.
9. Exposure visits to better performing Gram Panchayats, Districts and other States. These visits may be organsied for PRI members, village level motivators and beneficiaries to other NGP awarded villages or villages those who have demonstrated innovative models of sanitation.
10. Identification of Schools and Anganwadi Centres within the G.P. that do not have toilet facilities.
11. G.P. and ward wise identification of the number of households without proper and safe toilets, number of households where toilets exist but are only partially used or not used at all. This should be done in a transparent and systematic manner. Categorization of BPL and APL families that do not have toilets is also required.

Issues:

• IEC Action Plan, specifying the detailed activities for identified stakeholders at all levels (State, District, Block, G.P.) with special focus at GP level.
• As per the guidelines, specific identified functions for the Swachchhata Doot may be outlined.
• Adequate monitoring and impact assessment of IEC activities.
• Fund Utilization
• Capacity building of TSC officials, BRCs, WSSOs, DWSCs for developing effective
communication strategy
• Optimum utilization of fund for different IEC activities
• Regular monitoring and assessment of IEC activities

India WASH Forum

Are we getting Crowded, Thirsty and Sick? : Urbanization, Water Management and Human Health

About 30 experts from urban planning and public health met in Ahmedabad to discuss and debate the preliminary findings from the research Project 'Urbanization, Water Management and Human Health in Ahmedabad' (hereafter the Project). The project was carried out under the 'Water and Health' research theme at Center for Development Research, University of Bonn with an aim to understand the linkage between water management and human health. This offers insight to assess the progress of 'improved' drinking water and sanitation as a preventive measure used by national and international agencies not only towards meeting the MDG target, but also reducing infectious diseases. Further, it will also offer insight to assess complex interaction of various determinants of health – "causes of the causes" of ill-health. Funded by the German Research Foundation (DFG) the research (i) analyzed the spatial distribution of water-borne/vector-borne diseases in Ahmedabad city, (ii) assessed the socio-economic, institutional and ecological burden on water-transmitted diseases at the household level in two selected wards in the city, and (iii) analysed spatially and temporally the factors influencing water-borne diseases among individual cases in the two wards in the city. The workshop was aimed to share the preliminary findings with government officials, practitioners and research communities. As acknowledged by **Dr. Vijay Kohli**, Deputy Medical Officer, Department of Health, Ahmedabad Municipal Corporation, the workshop was the "first gathering attended where health department and city

> *It is a "first gathering where health department and city engineer department of Ahmedabad Municipal Corporation were jointly discussing urban health issues".*
>
> Dr. Vijay Kohli, Deputy Medical Officer, AMC

engineer department were jointly discussing urban health. In the past whenever there was outbreak of water-and vector-borne diseases the department of health officials were called, but never involved the department of city engineer." He reaffirmed the importance of working together for ensuring well-being of urban health in rapidly urbanizing India.

In his opening remarks **Prof. Dileep Mavalankar** (Dean of Indian Institute of Public Health-Gandhinagar) highlighted urbanization has overcrowded of our cities, unable to meet the quality and quantity and has led to deadly (re)emergence of disease that cuts-across social boundaries. He reiterated that India in spite of its emerging economic power and space technology, unfortunately it has not been able to ensure safe drinking

> *"Few weeks back, two manhole workers died inside the campus of the Space Research Center in Ahmedabad due to poisonous gas. It is a pity that we can send human beings to space thousands of kilometer away from Earth, but cannot safe guard man-hole workers just few feet below the Earth"*
>
> Prof. Dileep Mavalankar,
> Dean (Academic), IIPHG

water and sanitation to its people. "Few weeks back, two manhole workers died inside the campus of the Space Research Center in Ahmedabad due to poisonous gas. It is a pity that we can send human beings to space thousands of kilometer away from Earth, but cannot safe guard man-hole workers just few feet below the Earth."

Inviting Prof. Ghanshyam Shah, a prominent political scientist and public health scholar, Dr Saravanan noted about his book (1997) on Surat plague as the first political-anthropological piece of an epidemic in contemporary India. His book warns of a sociopolitical disease related to the value system of the populace, the lop-sided nature of development, the crisis in governance, and a fragile and fragmented civil society, which is still relevant in many developing world. In his key note speech **Prof. Ghanshyam Shah** (National Fellow, ICSSR), highlighted the importance of public health as encompassing improved quality of life and called for redefining urbanization in relation to enlightment, modernity, and rational way of living. Drawing from his book (1997) he revealed how the 1994 plague outbreak that originated in the vicinity of Surat rapidly spread due to filth in the city. He argued for health has to be integral part of the urban and industrial planning, rather than being at a fag-end of a crisis, and further highlighted that urban-rural has to be viewed in continuum for planning rather than as separate administrative units. While Prof. Shah highlighted on the poor urban planning and governance and called for anti-filth campaign, the second key-note speaker **Prof. Darshin Mahadevia** (Professor and Dean Center for Urban Equity, CEPT University) outlined how urban

planners and policy makers conveniently ignore the urban poor (our slums). She argued that the urban planning has become more regulatory ignoring the informal sector of the society, which contributes about 80% of the employment in the State. She highlighted the importance of tenure security for the informal sector in urban regions to maintain better health. She described the existing three routes for tenure security – collective action through NGOs, new housing for weaker section through public policy and through market action. Drawing from her study in two wards in Ahmedabad she demonstrated how poor tenure security is linked with poor services affecting human health.

The second half of the forenoon session was devoted to presenting the preliminary findings from the research

> *"The urban and rural should be viewed as an integral entity and as continuum for urban planning and health management"*
>
> Prof. Ghanshyam Shah,
> National Fellow, ICSSR

project 'Urbanization, Water Management and Human Health in Ahmedabad city'. The Project Coordinator **Dr. V.S.Saravanan** (Senior Research Fellow, University of Bonn), highlighted the worldwide growing importance of water supply and sanitation, and more so, the importance to understand the role of water management on human health especially in rapidly urbanizing economies. Ahmedabad set a perfect example, with more than 90 percent coverage of drinking water and sanitation, the city still faces increasing water- and vector-borne diseases (hereafter the diseases). The research findings were presented in three parts. The first part highlighted how the spread of diseases is historically rooted in the legacy of the urban planning and management, and in the current state of urban governance. The second part followed the path of John Snow's in finding the cause of diseases. This involved mapping the quality of water infrastructure and the incidence of diseases in two wards for two years (2011 and 2012). The quality of water infrastructure took into considerations the occurrence of water leakage, water quality issues and mixing of drainage and drinking water as reported by people to the City Engineers office and action taken by the officials to these complaints in the wards. This mapping was spatially correlated with confirmed incidence of diseases (as reported to the urban Health Centre) over a period of two years. This showed convergence of poor water infrastructure and high incidence of diseases in the selected two wards in the city. Though these were crude indicators, they illustrate a simplistic spatial correlation between poor infrastructure and incidence of diseases. The third part from **Ms Shahin Saiyed** (Research Fellow, ZEF-IIPHG) highlighted

> *"Tenure security improves quality of life, and in turn human health".*
>
> Prof. Darshini Mahadevia,
> Dean CEPT University

from the household survey the importance of social, economic, environmental and demographic factors influencing the incidence of (confirmed) diseases in the sampled households. The survey revealed more than one incidence of diseases in 30% of the household between January to July 2012. Many of the households also had a number of chronic diseases, mainly pertaining to heart disorders, tuberculosis, diabetes, thus a probability of co-morbidity among individuals. The preliminary analysis reveal the role of social behavior of the households (maintaining hygiene, eating habits along the roadside, high mobility of the households, higher family size, consuming alcohol, and lesser education of adults in the household), poor quality of housing, occupation of the household members and the environmental hygiene (water stagnation around the house, bad smell in drinking water, households in low lying areas, and growing leakage in the drinking water pipeline) as a crucial cause for the incidence of diseases at the household level. Dr. Saravanan emphasized that the research is ongoing with prospective survey among selected households (Sep 2012- Feb 2013) still to be completed, which will throw light on the socio-behavioral characteristics of the individuals, and specific factors influencing the incidence of diseases. The year 2013 will be primarily committed to analyzing the information (quantitative and qualitative) collected across different scales (individuals-households-ward-city) and using diverse spatial and statistical analytical tools.

The Project findings were complemented with two other presentations on urban health issues. **Dr. G T Makwana**, (Dy Health Officer, Ahmedabad Municipal Corporation) examined the focal outbreak of the infectious viral hepatitis in Ahmedabad between 2011-12. Dr. Makwana revealed that many of the outbreaks happened due to pollution of water, especially between the pumping station (source) and the user-end (household). He identified illegal water connections as the foremost causes of pollution. Due to illegal water connections the pipes were

broken. This gives chances for mixing of drainage and drinking water leading to infectious hepatitis. He cited many households go for illegal connection due to complicated process to get piped drinking water and sewerage connections. He called for 24x7 supply of water, create awareness of safe water (boiling), and strengthen the health management information system. **Dr. Manvita Baradi** and her team from Urban Management Center (UMC) shared their experience of preparing the health plan in Pune, Jaipur and Bhubaneswar in the country. Drawing from the case of Bhubaneswar, they highlighted – inadequate information system, poor health infrastructure, inadequate urban policies incorporating health dimensions, and inadequate interdepartmental coordination hampering the health status of the urban population.

> *"Following John Snow, a renowned epidemiologist in 19th Century, the study finds a strong spatial correlation between poor infrastructure and spread of water-transmitted diseases".*
>
> Dr. V.S. Saravanan,
> Senior Research Fellow,
> ZEF, University of Bonn

Overall the workshop questioned the approach of 'improved' measures to achieve safe drinking water and sanitation measures, and to reduce growing infectious diseases in urban region. While improving the water infrastructure is of high importance, the workshop participants discussed and debated on issues that could be a precondition before venturing into this high capital intensive system. Drawing largely from the findings from the Project, keynote lectures and other presentations, the suggestions were broadly on the following topics:

(i) Strengthening health management information system (improving the monitoring of water infrastructure, entomological monitoring, and geo-referencing of the health-related information),

(ii) Identify areas for improvement in urban policy (integrating health in urban planning process, improvement of drug policy, opportunities for secure land tenure, relook at staffing norms, identify incentives and disincentives for reducing incidence of disease).

(iii) Identify areas for technological change (mapping the quality of pipelines, rehabilitating the existing sewerage and drinking water networks, technologies for cleaning sewerage lines and man-hole workers, improved technology for maintaining water pressure and leakages, use of electronic media for monitoring, water metering, and documenting success cases of water recycling).

(iv) Early warning systems (strengthening the existing rapid response team, importance of geo-referencing the conditions of urban infrastructure)

(v) Research on water pricing, incentives and disincentives mechanism, burden of direct and indirect cost of poor urban infrastructure on households, integrating the functionalities of urban departments, opportunities for safe disposal of solid waste, understanding of the co-morbidity of diseases)

Closing the workshop, Dr Saravanan thanked the participants, and the collaborating institutions for taking the project forward with some concrete research and practical initiatives along with Ahmedabad Municipal Corporation and also with Government of Gujarat.

Dr. V.S.Saravanan
Senior Researcher, Department of Political and Cultural Change
Center for Development Research (ZEF)
University of Bonn

'AuroAquasafe' as Point-of-Use Purifier for Treatment of Contaminated Water at Home

Srikanth Raghavachari [rsrikanth60@gmail.com]

The Problem: Drinking water contamination

The occurrence of excessive amounts of arsenic, fluoride, iron and microbes in drinking water in India and other developing countries is of great health concern.
The major bottle neck is the absence of a sustainable solution that is easy to use, efficient, effective and economical for treating water at household level for drinking purposes. It is estimated that more than 200 million all over the world consume water that has fluoride in excess of 1 mg/l. Majority of them are found in developing countries. WHO estimates that 1.7 million deaths related to unsafe water. Nearly 26 million suffer from excess fluoride in China. In India nearly 90 million people in the country are affected with dental, skeletal and/or non-skeletal fluorosis. The fluoride affected states are: Andhra Pradesh, Bihar, Delhi, Gujarat, Haryana, Jammu and Kashmir, Karnataka, Kerala, Madhya

Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu and Uttar Pradesh.

Arsenic contamination affects 137 million worldwide; approximately 70 million in India and Bangladesh and 30 million in other ASEAN countries. In terms of the number of affected groundwater sources and the population at risk, the problems are greatest in Bangladesh, but problems have also been identified in Indian provinces adjoining Bangladesh, China, Vietnam, Thailand, Cambodia, Myanmar, Nepal and Pakistan. About 28 million in Bangladesh are affected due to high concentration of arsenic in the drinking water.

Although there are several treatment methods that are available for removal of arsenic and fluoride in the drinking waters, the majority of them are meant for centralized treatment systems at the community level.

Studies have shown that communities are reluctant to access safe water from a community water treatment facility that is located at long walking distance from home.

This makes community or households to fall back on the contaminated water supply that is either located within their household are nearer to their home. Therefore, point of use treatment is more convenient and an assured means of safe water provision.

Why 'AuroAquasafe'?

'AuroAquasafe' has been specifically developed and designed as a user friendly product keeping in view of practical problems encountered on day to day basis by rural poor in developing countries who are affected by multiple contaminants like fluoride, arsenic, iron and microbial contamination. It is unique product that is able to treat simultaneously fluoride, arsenic, iron, viral, bacterial and protozoa contamination simultaneously to the desired safe levels.

'AuroAquasafe' as treatment solution:

'AuroAquasafe' is a powdered mixture that removes arsenic, iron, fluoride, pathogenic organisms and suspended solids rendering contaminated water into safe drinking water. It has been developed by 'Environmental Monitoring Service' laboratory in Auroville, Tamil Nadu, India. 'AuroAquasafe' contains a chlorine containing compound, aluminium salts that acts as coagulant and other additives which provide good coagulation and flocculation process for water treatment.

'AuroAquasafe' can remove following contaminants from contaminated drinking water:

1. Fluoride from 7 ppm to less than 1.5 ppm level.
2. Arsenic (AsIII & AsV) from 400 ppb to less than 10 ppb level.
3. Iron from 5 ppm to below 0.3 ppm level.
4. Bacteria more than 99.999 % removal rate
5. Viruses more than 99.99 % removal rate
6. Protozoa parasites – more than 99 % removal rate.
7. Suspended particles from 80 NTU to less than 10 NTU level.
8. Organic matter

'AuroAquasafe' removes microorganism by double action: by precipitation of microbes due to coagulation, flocculation process and by disinfection with NaDCC (sodium dichloroisocyanurate). After 30 minutes of waiting after usage of 'AuroAquasafe' the residual chlorine concentration reaches very low level (< 0.5 ppm) therefore does not impart unpleasant taste and odour to the treated water.

'AuroAquasafe' effectively removes soluble organic matter mainly by coagulation and flocculation and not by oxidation of organic matter with chlorine. Therefore even in water with high organic matter the residual chlorine concentration is similar.

The pH of the raw water for effective removal of arsenic, fluoride and iron should be in the range of 6.0-8.0. For bacteria, virus and protozoa removal the pH of the raw water can be in range of 6.0-8.5.

Types of water that can be treated with 'AuroAquasafe'

1. Bore well - water contaminated with fluoride, arsenic, iron and microbes
2. Surface water - containing turbidity, organic matter and microbial contamination
4. Rain water - contaminated with suspended matter and turbidity
5. Flood water - organic matter, turbidity, microbial contamination

'AuroAquasafe' is safe for long term use and can be considered as an effective technology for treating water. In spite of using Aluminium salt the residue of Aluminium in treated water usually below the 0.2 ppm acceptable level as per WHO guidelines.

Field trials were conducted with fluoride contaminated water from 6 states in India using 'AuroAquasafe' sachet and the results are presented in (Table 1). WHO guidelines for Fluoride - 1.5 mg/L.
Table 1

R.W. – Raw water; T.W. – Treated water

Field trials have been conducted with Arsenic contaminated water in India in West Bengal and Bihar states and results are presented in (Table 2). WHO guidelines for Arsenic - 10 µg/L.
Table 2

Sl. No.	Parameters	Rajasthan Churu		Madhya Pradesh Dhar		Tamil Nadu Dhamapuri		Bihar Khaira		Uttar Pradesh Unao		Andhra Pradesh Nalgonda	
		R.W.	T.W.	R.W.	T.W.	R.W.	T.W.	R.W.	T.W.	R.W.	T.W.	R.W.	T.W.
1	pH	8.9	8.0	8.1	7.9	7.3	7.5	8.2	8.5	7.2	6.7	7.3	6.8
2	Turbidity, NTU	0.9	0.4	2.0	0.3	0.5	0.2	0.9	0.4	0.6	0.2	54	4.9
3	Total Hardness, mg/L	950	10000	83	155	185	230	230	298	130	180	410	455
4	Fluoride, mg/l	4.3	1.4	9.3	1.8	3.8	0.9	8.4	0.8	6.5	1.3	4.2	1.1
5	Aluminium, mg/l	<0.01	0.19	<0.01	0.23	<0.01	0.08	<0.01	0.11	<0.01	0.18	<0.01	0.17

Sl No	Parameters	West Bengal	Bihar		
		Burdwan	Bhojpur, sample 1	Bhojpur, sample 2	Capri

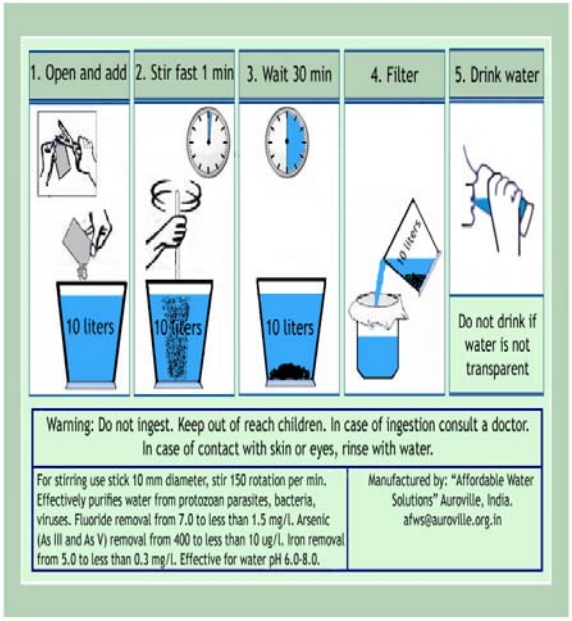
		R.W.	T.W.	R.W.	T.W.	R.W.	T.W.	R.W.	T.W.
1	pH	6.4	6.6	7.2	7.7	7.3	7.6	7.8	8.0
2	Turbidity, NTU	1.6	0.3	0.8	0.2	0.6	0.3	0.7	0.2
3	Total Hardness, mg/L	122	192	164	215	172	224	193	242
4	Arsenic, µg/l	470	6.6	278	4.5	667	20	42	<1
5	Aluminum, mg/l	<0.01	0.09	<0.01	0.05	<0.01	0.08	<0.01	0.06

R.W. – Raw water; T.W. – Treated water

'AuroAquasafe' usage:
'AuroAquasafe' comes in a 5x8 cm sachet containing 5.6 g treatment chemicals. Each sachet treats 10 litres of contaminated water.

Materials required to use 'AuroAquasafe'.

- A scissor to open the sachet
- 10 litres bucket preferably one bucket for treatment and one for storage of treated water
- Cotton cloth filter to remove larger particles from water. It can be supplied along with 'AuroAquasafe'
- A wooden stick of 1 cm diameter and 45 cm length which can be supplied along with 'AuroAquasafe'



How to use 'AuroAquasafe'.

Step 1. Open the 'AuroAquasafe' sachet using scissors. Add the contents of the sachet into a bucket containing 10 litres of contaminated water.

Step 2. Stir the water vigorously (150 rotations per minute) for one minute using the wooden stick.

Step 3. Remove wooden stick. Wait for 30 minutes for flocks to settle down, till the water become clear.

Step 4. If the water after treatment does not contain any floating debris it can be poured directly to the clean storage bucket. If the water has some floating debris, a filter (cotton cloth) placed on the clean bucket can be used to remove them.

Please note: Precipitation particles (sludge) which are left at the bottom of the bucket after coagulation can not be filtered with the filter cloth. They should stay in the bucket, by carefully pouring top water into the clean bucket.

Step 5. The water in the clean bucket is safe and ready for consumption.

Important precautions to be followed using 'AuroAquasafe'.

- Stirring with stick of 1 cm diameter and with uniform high stirring speed (150 rpm) is a vital step needed for effective removal of arsenic from water. A larger diameter stick and/or slower stirring can significantly reduce arsenic removal efficiency. This is the most important for coagulation and precipitation of arsenic and less critical for iron and fluoride removal.
- Bucket for water storage should be different from the bucket used for the treatment.
- Never dip hands in the clean water to avoid recontamination of treated water with germs
- Do not drink water if the water it is not transparent after treatment.
- Sludge left in the bucket after coagulation/flocculation is stable and does not leach fluoride or arsenic into the environment. The sludge can be quite toxic for a while because it can contain the germs in concentrated form. It should be discarded in a pit:
  - inaccessible for children
  - inaccessible for pet animals
  - away from well which are used as a source of drinking water

Contact manufacturer: afws@auroville.org.in.

New Sanitation Figures Compete with Official UN Statistics: 6 in 10 Lack Proper Facilities | Source: by Brett Walton, Circle of Blue, Feb 26, 2013

Official United Nations figures claim that 2.5 billion people lack access to adequate sanitation. But new research from the University of North Carolina puts the total at more than 4.1 billion people.

As world leaders and grassroots groups discuss how to reduce poverty and improve lives, debates over precise definitions and accurate measurements are taking on a new urgency. The agenda-setting Millennium Development Goals expire in 2015, but already new definitions for water, sanitation, and hygiene — called WASH by insiders — seek to influence the post-MDG global development agenda.

Last month, the Water Institute at the University of North Carolina, Chapel Hill, challenged official statistics from the United Nations on the number of people without proper toilet facilities: UNC put the figure at 4.1 billion people, compared with 2.5 billion claimed by the United Nations. Both figures assessed conditions in 2010.

The discrepancy between the two sets of sanitation figures comes from different accounting methods. The United Nations measures hardware — the toilet, in this case — and how well it protects the user from immediate contact with the waste. The UNC researchers, on the other hand, approached the question from a public health angle: they also considered hardware, but in a broader sense, by asking whether or not the sewage is treated.

"We looked at public health and the environment beyond just the user," Rachel Baum told Circle of Blue. Baum is a co-author on the paper, which was published online in January in the journal **Environmental Science and Technology**.

Baum and her colleagues wondered, "Is sanitation protecting the wider community?"

More often than not, they found, the answer is no. In 2010, some 4.1 billion people — six out of every 10 people on the planet — did not use toilet facilities that ultimately treat the sewage before it is returned to the environment.*

This is the second time in less than a year that the Water Institute has challenged WASH statistics from the United Nations. In March 2012, a study published in the***International Journal of Environmental Research and Public Health*** found that 1.8 billion people drink unsafe water — a figure that is more than double the 780 million people who lack access to an improved water source, according to the **United Nations Joint Monitoring Program's 2012 update**.

Again, the discrepancies come from the way in which the data is collected: the United Nations defines access to drinking water in terms of infrastructure — in other words, the taps, pipes, and wells used to deliver water — rather than water quality, as measured by the Water Institute.

Shaping Things to Come

Having set the agenda since 2000, there are**eight Millennium Development Goals** that will expire in 2015. WASH issues are included in the MDG to "**ensure environmental sustainability**."

Last year, the United Nations declared that, according to its metrics, the world had achieved the MDG for drinking water in 2010. The sanitation target is not likely to be achieved, according to an **August 2012 update**. Both goals sought to halve the proportion of people without access to improved drinking water and sanitation from a 1990 baseline.

The definitions — and the discrepancies between the definitions — of access and quality matter. The United Nations is now discussing which items will comprise the global development program after 2015, when the eight Millennium Development Goals expire.

At stake in the next round of goal-setting is a place in the global-aid pecking order and a chance at the rivers of cash that flow toward the top priorities. **Development aid for drinking water and sanitation** reached $US 7.8 billion in 2010, and loans to the sector added an additional $US 4.4 billion that year, according to the United Nations.

Upcoming Events

CEO Water Mandate is pleased to convene the *Conference on Corporate Water Stewardship and the Post-2015 Development Agenda* in Mumbai, India. For those of you who are unable to attend the meeting in person, we invite you to observe today's sessions via webcast. The event will be live streamed at **10:30pm ET (7:30pm PT, 4:30am CET)** at www.worldwewant2015.org/water. The audience is encouraged to participate in these important sessions by posting comments and questions at Facebook: Waterpost2015 and Twitter: #waterpost2015

The IRC- International Water and Sanitation Centre, Netherlands (http://www.irc.nl),in association with All India Disaster Mitigation Institute (AIDMI) (http://www.aidmi.org), Ahmedabad and Centre of Excellence for Change Management (CEC)(http://waterandclimatefuture.com), Chennai is organizing a **one-day Round Table at the India Habitat Centre, New Delhi on March 13, 2013dedicated to the theme *Sustainable WASH Service Delivery – for every one forever*.** The objectives of the workshop are to understand determinants of sustainable service delivery in India; prioritize the key components and to co-create and shape an action framework for implementation that builds on the work that IRC is undertaking in India with partner organizations.

IRC would bring in its regional and global wash sector experience of more than four decades, specifically the multi-country action research learning from the Triple–S program (sustainable services at scale) and the LCCA (life cycle cost approach) program as value proposition, to support nationally aligned wash sector programmes in the country.

During the workshop a series of innovative think pieces and policy briefs developed by national experts and the discussion note on key wash sector challenges to sustainability in India would be deliberated and reviewed by key sector stakeholders, leading to the consultative development of a draft national sustainability framework

for action. The framework so developed would form the sheet anchor of IRC's India country programme for implementation through a strong network of partner organizations over the next three to five years.

The Energy and Resources Institute (TERI) with support from Norwegian Ministry of Foreign Affairs is organising a workshop on 'Water Cooperation for Energy Security' scheduled to be held on 21-22 March 2013 at the India Habitat Centre in New Delhi. The workshop aims to identify the issues leading to conflict in the region and explore the opportunities for collaboration at different levels.

Invited delegates include decision makers and representatives from academic institutes, think tanks, and Non-Governmental Organizations from South Asia who will discuss about the major threats for human and regional security. In addition, the discussions will aim at identifying sustainable pathways for future cooperation, particularly in terms of understanding and advancing sustainable water governance solutions through shared vision and coordinated efforts.

India WASH Forum Trustees

About India WASH Forum

India WASH Forum is a registered Indian Trust since 2008 with Trustees from all over India. It is a coalition of Indian organizations and individuals working on water, sanitation and hygiene. The coalition evolved out of WSSCC support to national WASH sector advocacy.

In order to undertake credible independent WASH advocacy work in India, the national coalition got registered as an Indian charity in 2008 and has undertaken a number of significant research and advocacy work that includes:

Knowledge Networking and Advocacy initiatives undertaken by India WASH Forum;

- Gender and Sanitation South Asia Workshop with National Foundation of India in Delhi; 2005
- Review of Swajaldhara and TSC Programme Guidelines; 2007
- Input to the Technical Expert Group set up to review the National Drinking Water Mission(RGNDWM); 2007
- Civil Society Input, Urban Sanitation Policy 2009
- Review of TSC in 4 states of India 2009
- Organisation of SACOSAN 3 in Delhi. CSO session and a CSO Statement of Action, 2009
- National Right to Water and Sanitation Workshop 2009 with participation from the Ministry and CSOs
- Start up of the GSF programme in India
    - Launch workshop 2009 with stakeholders in Delhi, 2009
    - Developing and finalising the Country Programme Proposal, 2010

India WASH Forum

  - Leading the PCM of GSF, as an institutional host and Chair and Convener.
  - Providing oversight for programme review.
- Member Govt of India 12th Five Year Plan Working Group on Drinking Water and Sanitation 2010. Recommendations on behaviour change priorities and staffing for national sanitation programme.
- Recommendations for Urban and Rural Water and Sanitation inputs: national consultations on drinking water and sanitation by Planning Commission Govt of India and Arghyam 2010
- National Pro poor Urban Water and Sanitation Consultation, 2010
- National report and a South Asia Report for SACOSAN 3 : Peoples Voices – a National Study project, Reports for India and South Asia, 2011
- Formal Input to the National Water Policy 2012, with a focus on drinking water and sanitation
- Report to the Ministry of Drinking Water and Sanitation: UNDP international consultation – Greening of Rural Water Supply Programme and Guidelines, 2012
- FANSA-IWF Review of national commitments and progress since Sacosan 4, and preparation for World Water Forum 2012
- School Sanitation Baseline Research by GIZ for Tirupati and Mysore, 2012

A unique feature of IWF is its non-hierarchical set up. Most of the Trustees of India WASH Forum are represented in their individual capacity and do not represent the organsiations they are associated with. The agenda and activities that India WASH Forum are determined at the initiative of the Trustees and support from organisations and individuals.

Since 2010, India WASH Forum is actively engaged in the Global Sanitation Fund(GSF) and currently hosts Programme Coordination Mechanism(PCM), of the **GSF in India.** The role of the PCM is to provide a governance oversight to the GSF Programme in India. The Programme is being implemented by an Executing Agency called Natural Resources Management Consultancy(NRMC) that makes NGO sub grants in the two states of Jharkhand and Assam. The Programme is managed directly from WSSCC Geneva and with the support of the PCM and an Auditor(called the Country Programme Monitor) that is KPMG for India.

The mandate/charter of India WASH Forum is Hygiene and Health outcomes from sanitation and water;

- **Promoting knowledge generation** through research and documentation which is linked to and supported grassroots action in the water-sanitation-hygiene sectors. Special emphasis is given **to sector-specific and cross-cutting thematic learnings.**
- **Supporting field-based NGOs and networks in their technical and programmatic work.** The IWF would also consistently highlight gender and pro-poor considerations, and provide a national platform for interest groups working in the sector to come together.
- **Undertaking policy advocacy and influence** work through
  - Monitoring and evaluations
  - Media advocacy and campaigns, and
  - Fact finding missions
- **Undertaking lobbying and networking to promote common objectives** in the sector.

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