REPORT OF THE NATIONAL CONFERENCE
Social Innovations for Improving Urban Sanitation: Lessons for Scaling-up

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Acronyms

BMGF	Bill & Milanda Gates Foundation
CBO	Community Based Organisations
CLTS	Community Led Total Sanitation
CSOs	Civil society organisations
CPR	Centre for Policy Research
CRSP	Central Rural Sanitation Programme
CURE	Centre for Urban and Regional Excellence
DEWATS	Decentralised wastewater treatment systems
ESI	Employees State Insurancce
EU	European Union
FSM	Faecal Sludge Management
GoI	Government of India
ILCS	Integrated Low Cost Sanitation scheme
MoUD	Ministry of Urban Development
NGOs	Non-Government Organisations
NUSP	National Urban Sanitation Policy
NBA	Nirmal Bharat Abhiyan
ODF	Open Defecation Free
PRIA	Participatory Research in Asia
PMC	Pune Municipal Council
NITI (Aayog)	National Institution for Transforming India
SBM- U	Swachh Bharat Mission (Urban)
SA	Shelter Associates
TSC	Total Sanitation Campaign
ULB	Urban Local Body
WASH	Water, Sanitation and Hygiene

Executive Summary

On December 14, 2016, the Society for Participatory Research in Asia (PRIA) and Centre for Policy Research (CPR) organised a daylong National Conference on "Social Innovations for Improving Urban Sanitation: Lessons for Scaling-up" at India Habitat Centre, New Delhi.

The conference was conceived as part of a larger collaboration between PRIA and CPR on the one hand and 12 non-government/not-for-profit organisations on the other. The latter have been involved in pioneering various innovative responses to the many challenges that afflict the urban sanitation sector in different parts of India. The role of PRIA and CPR has been to collate information from and about these diverse initiatives in order to identify patterns that link challenges to solutions across regions and arrive at a deeper understanding of what is working, why it is working and how it can be replicated in other contexts and regions.

The objective of the conference was to present the findings that have emerged so far from this collaborative study. Two catchphrases used in the conference title point towards the guiding framework that was adopted: 'social innovation' and 'scaling-up'. The primary issue that binds these two concerns is: how can on-ground solutions that seek to include and address the specific sanitation needs of marginalised local communities (social innovation) translate into national-level policy-making (scaling-up)?

What emerged from the discussions and presentations at the conference can broadly be divided into two categories: priorities and solutions. For those working in urban sanitation, certain questions had to be very seriously considered if real development was to occur, such as: Who is being included/excluded from the decision-making processes? Who are the beneficiaries of the interventions? Are the interventions being designed in a way that sustain them over time regardless of changes in leadership? Is result-oriented planning/policymaking rendering invisible the equally important matter of process, i.e., are we only thinking in terms of numbers or are we investing in improving each stage of the value-chain? The 'quantity vs quality' debate, whether in the context of behavioural change, water supply, waste treatment, safety and security of women, or any other related issue, took centre-stage across sessions.

All of these questions were touched upon by speakers through the course of the day, with representatives of the partner organisations providing numerous examples of innovations that they had experienced success with or learned from. While some touched on the importance of overarching leadership, attention was also given to participatory practices that focused on inclusion through dialogues, encouraging community ownership through leadership-building and self-funded efforts. Strengthening relationships between different stakeholders such as the community and the municipality, as also scientific-technological solutions that addressed labour concerns and gaps in treatment also found a place.

The most heartening takeaway was that there are solutions to all the issues that plague the sanitation sector and that they work on common principles: include, educate, incentivise and connect – innovations will follow. The need of the hour is to ensure that these principles are

regularly observed and that learnings and successes are continuously shared in order to put in place a self-correcting system rather than one which relies on uneven ignitions to bring about change.

Background to the Conference

Improving the sanitation situation in India is imperative for drastic improvements in the global access to safe sanitation. The sheer magnitude of the sanitation challenge of the country is so enormous that it is holding back the global sanitation progress. In 2012, 60% or 597 million people1 who practiced open defecation across the world, resided in India. Consequently, prioritising sanitation in India is a global as well as a national necessity.

The urban sanitation challenge in India has found its place in the mainstream policy discourse with the introduction of National Urban Sanitation Policy (NUSP) in 2008. The urban and peri-urban context pose a distinct set of challenge for ensuring equitable access to safe sanitation. Population growth means that there is an increasing pressure on the limited resources. As per the 2011 Census, the urban population in India stands at 377 million. It has increased from 27.81% in 2001 to 31.16% in 2011. The issue of space constraint, urban agglomeration, cropping up of slums, inadequate access to affordable housing are of the key challenges of the urban scape. The data reveals that towns and cities are growing and within the decade an additional 2,774 towns have been added to the Census. Growing population and inclusion of more towns in urban areas have serious implications for provision of basic services especially for the people living in poor and informal settlements. The 2011 Census data on sanitation reveals that 18.6% households do not have latrine facilities, and 12.6% households practice open defecation in urban areas. Although 81.4% households have latrines, 32.7% out of this are serviced by sewer network systems, 38.2% have septic tanks, while 7.1% have pit latrines and the rest have other on-site sanitation systems. 37.3 % households are connected to open drains and 18.2% households do not have any drainage.

To address the sanitation challenge, the Government of India (GoI) has launched the Swachh Bharat Mission (SBM) with a lot of vigour. This programme which continues with elements from past programmes such as the Integrated Low Cost Sanitation scheme (ILCS), the Central Rural Sanitation Programme (CRSP), Total Sanitation Campaign (TSC), Nirmal Bharat Abhiyan (NBA) is being implemented as a flagship programme in which many departments of the GOI are coordinating. At the launch of the mission, the Prime Minister emphasised that "if we collectively make it a people's movement then I don't see any reason why we will not be counted among the clean cities and nations of the world".

The launch of SBM has instilled a renewed political commitment and increased awareness with the citizenry to deal with the massive sanitation challenges – essential prerequisites to success of any large scale programme. However, a lot of systemic limitations may impede the realisation of SBM vision, unless these are addressed in a systematic and time-bound manner. A critical factor is the institutional capacities of municipalities to foster a bottom-up planning process with

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[1]For more details, read: World Health Organization and UNICEF. 2014. *Progress on sanitation and drinking-water-2014 update*. Geneva: WHO Press. Available on:
http://www.unicef.org/gambia/Progress_on_drinking_water_and_sanitation_2014_update.pdf. [Accessed on: 31 October, 2016].

inclusion of the urban poor. The city sanitation needs to be planned and implemented in an integrated manner with an incisive focus on scientific solid and liquid waste management that can be scalable.

Alongside governmental efforts for improving sanitation, various non-governmental development institutions have experimented with innovative ideas and efforts derived from regional milieu, and geared to meet the needs of the community and ensure access to safe sanitation. Cities are increasingly becoming centres of social innovation and change for developing new approaches to improve sanitation.

Literature review reveals that the term "social innovation" has varied meanings and various perspectives have been used to theorise the subject2. Moulaert et al. (2005)3 considers social innovation as primarily a normative concept, fore-grounded in the ethical position of social justice and social inclusion. In his understanding, social innovations are changes in agendas, agencies, and institutions leading to a better inclusion of excluded groups and individuals in spheres of society. Additionally, literature also highlights that the influences on social practices produced by innovations are integral to the process of social innovation. For instance, Mulgan (2012)4 acknowledges that the sphere of social innovation has grown primarily as a field of practice. He puts forth a broader definition of social innovation, referred to as innovative activities and services motivated by the goal of meeting a social need, and one which is predominantly developed and diffused via a network of organisations that primarily work on social issues. Further, Pol & Ville (2009)5 distinguish between social innovation and business innovation, and present the former as a promising field to lead in social change. According to them, an innovation is social innovation if the new idea has the potential to improve either the quality or the quantity of life.

From the literature review, three features that appear central to the idea of social innovation are: (a) social innovation entails a chain of processes towards finding new solutions (ideas, processes, models) to meet social needs, technological innovation often accompanies these changes in social processes (b) social innovations contributes to social change by influencing social practices; and (c) social innovations are driven by the intention to produce sustainable and scalable solutions (and not solely profit motif) derived from local contexts, in order to address societal issues.

Civil society organisations (CSOs) including the Non-Government Organisations (NGOs) and people's movements, have been actively promoting and facilitating socially innovative models

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2For a literature review on the varied perspectives on social innovation, refer:
Choi, N. & S, Majumdar. 2015. "Social Innovation: Towards a Conceptualisation". In *Technology and Innovation for Social Change*. Edited by S, Majumdar et al. Springer: India.
3Moulaert, F. F, Martinelli. E, Swyngedouw. & S, Gonza´lez. 2005. "Towards Alternative Model(s) of Local Innovation". *Urban Studies*. 42 (11). Available at
https://www.researchgate.net/profile/Frank_Moulaert/publication/228673600_Towards_Alternative_Model(s)_of _Local_Innovation/links/0912f50c5196cd1861000000.pdf. [Accessed on: 31 October, 2016].
4Mulgan, G. 2012. "Social Innovation Theories: Can Theory catch up with Practice?" In *Challenge Social Innovation*. Edited by Hanz-Werener Franz, Josef Hochgerner and Jurgen Howaldt. Springer.
5Pol, E. & Simon, Ville. 2009. "Social innovation: buzz word or enduring term?" *The Journal of Socio-Economics.* 38 (6), 878-885. Available at http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1699&context=commpapers. [Accessed on: 31 October, 2016].

to improve urban sanitation. These innovations focus on improving dignity of marginalized communities including sanitation workers women and caste based occupational groups engaged in sanitation in order to mainstream their participation in policies and programmes on sanitation. The innovations range from providing low cost infrastructure solutions, demanding services from the service providers by mobilising citizens, generating awareness, building and strengthening community managed systems for ensuring sustainability of created assets, organising informal sanitary workers to demand dignity and justice, promoting and building collaboration and partnerships with various stakeholders including Government and private agencies to serve the unserved communities. SBM-Urban introduced by the Ministry of Urban Development (M/oUD) in the 2014 also recognises that to tackle the problem of sanitation in urban areas, participation and engagement of citizens, citizen's groups (ward committees, area sabhas, and resident welfare associations), government, elected representatives and civil society organisations is extremely critical. Lessons from these social innovations in various contexts and regions are imperative to achieve the objectives laid out in SBM-U.

Conference Proceedings

Inaugural Session

Shubhagato Dasgupta welcomed the guests and introduced the organisers (PRIA and CPR) and the other inaugural speakers. He then briefly discussed the backdrop against which the conference had been organised. Informing the gathering that it was CPR's 4th Annual Conference, he described the joint study being undertaken by CPR and PRIA as an attempt to 'systematically document the contributions of a collective of 12 non-governmental and not-for-profit organisations in the field of urban sanitation' (in India). Although only halfway through the exercise, it was thought important that they share their early findings on the social inequalities that were responsible for holding back advancements in the field – in other words, 'to look at the work being implemented on the ground through the prism of social innovation'. Social innovation as a concept had been in use for more than a century and meant different things to different people at different times, but had acquired greater interdisciplinary currency in the last 15 years, with the US government, the EU and many universities launching social innovation funds/programmes since 2009. While the definitional frameworks of social innovation that had been adopted for the study would be described in detail, it was necessary to remember, Shubhagato Dasgupta added on a cautionary note, that it did not serve as a substitute for real public participation. He concluded by outlining the programme design for the day.

Anju Dwivedi followed by talking about some of the definitions of social innovation as understood by CPR and PRIA for the study: alternatives to established scientific-technological solutions that didn't quite address social problems, a commitment to improving both quantity (life expectancy) and quality (opportunities to access healthcare and education) of life, and inclusion of the marginalised to transform power relations and meet social needs. These key ideas were incorporated by her in the following formulation: 'Social innovations are driven by the intention to produce sustainable and scalable solutions not only derived from the profit motive but also from local contexts in order to address larger societal issues.' This implied looking at the work of the 12 partner organisations/institutions in terms of the following parameters:

- History and trajectory – most of them started with a rural perspective, so how did they grow in the field of urban sanitation?
- What social innovations did they deploy and what has been the impact?
- What is the relationship between policy frameworks and social innovations? How have they influenced each other?
- What kind of networks and partnerships have been built over the years?
- What are the key challenges that must be addressed in initiating social innovations and scaling them up?

Ms. Dwivedi then briefly introduced the partner organisations, explaining how their activities had been thematically classified for the purposes of the study under the following heads:

mobilisation and implementation, pilot implementation, research, capacity building, policy advocacy, funding, networking and federations. Most of the partners, she clarified, were engaged in various types of activities simultaneously.

Kaustuv Kanti Bandopadhyay began his presentation by describing how the framework of the study had shifted its focus from documenting (as per the standard operating procedure of participatory research) the role of NGOs in the urban sanitation sector to looking at urban sanitation through the lens of social innovation. This shift occurred when PRIA and CPR were struck by the sheer number of innovations that were being implemented on the ground in response to local challenges and recognised the need to analyse these and figure out how they could be used to frame policy at higher levels. He went through some of the highlights that had emerged from this study up until then and raised questions that still had to be grappled with:

Highlights
• Organising the unorganised involves negotiating power differences at various levels – between citizens and the government, between slum dwellers and the middle class, as well as between slum dwellers and the government.
• A sense of community ownership and accountability emerges if the process of initiating change through innovations not only involves them but is led by them. Capacity-building (awareness, organisation, leadership, skills, etc) is intrinsic to this and where it has been given sufficient attention, the outcomes have been overwhelmingly positive: improved usage of toilets by all members as well as a greater sense of safety and security among women and hygiene consciousness among children.
• The data collected by organisations pertaining to communities can be used to put these communities on the map so that their existence is not denied by local authorities.

- Laws and policies are essential but insufficient guarantees of safety and dignity, as evidenced in manual scavenging. Mobilising and organising these groups and keeping their issues alive is indispensable.
- Perhaps what is required is a remodelling of the sanitation system. There are fascinating examples of waste pickers who became waste managers. As we formalise solid waste management, the informal side tends to get sidelined, but sanitation workers are forming cooperatives.
- Building the capacities of municipalities and ULBs as city managers, building accountability through performance assessment, monitoring and benchmarking, and linking it with existing government services is crucial. It is a data- and dialogue-driven process.
- Action research has resulted in new knowledge and has elucidated how this can be put into practice and scaled up at the policy level. Through dialogue, deliberation, and dissemination using new technology, many organisations have tried to share these lessons with policy makers, academia, civil society and the media.

Questions

- Most of the innovations are harvested in the local context. The moment we think of scaling up, the question of standardisation comes up. How could such innovations remain locally, contextually sensitive if they were standardised?
- How do we enhance the impact of social innovations, particularly in addressing structural inequalities such as those stemming from gender and caste? Do we have a scale that can really measure this impact?
- How do we ensure that the innovative techniques and the knowledge that has accrued from them will remain in the public domain and that people will have access to them, that they are not patented as one person's or institution's intellectual property? This is a public goods issue.
- How do you foster an enabling ecosystem where social innovations such as these, which have cropped up in the last 15 years, continue to flourish?

Sindhushree Khullar spoke about the challenges that had to be overcome in order for the Swacch Bharat Mission (SBM) to succeed, drawing on her experiences at NITI Aayog. The first of these was broadening the parameters that had characterised previous efforts by the government in the field of urban sanitation. This involves moving past a focus on 'structures, access and inputs', premised on the belief that if the government provided money or toilets, usage and change would automatically follow, to 'an understanding that we need to look at the communities who are the agents as well as the agencies of this entire change' (behavioural change). On the one hand, focusing purely on access results in the deprioritisation of quality and, on the other, focusing purely on structure results in the overlooking of process. For real development, access, quality and process must go hand-in-hand. For example, service providers in the sanitation sector (ragpickers, sanitation workers, manual scavengers) were also consumers; was their access to the same services factored into the scheme's design or were their interests going to continue to be sidelined as in the past? Their experience of insitutional marginalisation had made them suspicious of any kind of change, so it is important to think about how we can include them as stakeholders in and beneficiaries of the change. Moreover, another significant challenge was that of introducing a culture of innovation. Scalability and replicability has been discussed for long as a function of leadership, but leaders come and go.

How could scalability, replicability and innovation be institutionalised so that we would not have to rely on X-factors like leadership and social disruption from the front?

Johann Hesse briefly reflected on the history of the EU's association with India in the context of civil society, an association that goes to back to the early 1990s, when projects targetting local administration- and WASH-related issues began in places like Pune, Raigad, Solapur and Shimla. Today they are running a project in Mumbai to provide technical assistance for social waste management and sewerage treatment. He declared that one of the learnings to have emerged was that 'innovation is the key to deliver effective results'. Having said that, he placed the conference in the context of recent developments between India and the EU, including the March 2016 summit on the issue of water (at which an MoU was signed) and the release of a development policy statement ('New Consensus for Development') that outlined the way forward for India-EU relations. Common to these developments is an emphasis on exchanging best practices and knowledge and collaborating with not only the government but civil society as well in a big way.

Rajesh Tandon concluded the inaugural session by swinging the spotlight back onto the precise questions that needed to be kept in mind during the conference. Two considerations were of paramount importance: guiding principles and ecosystems. First, the principles underlying the various successes in innovation that were going to be discussed had to be compiled as building blocks for scaling-up. Second, in a country as diverse as India, where the mindsets of people and communities as well as policy interpretations and administrative cultures from different parts showed stark differences, it is important to try to understand whether and how these common principles could be made to work in diverse ecosystems of people and institutions.

Technical Session I
Equity and Social Change – Central to Imporving Urban Sanitation

Sheela Patel moderated the first technical session on Equity and Social Change, themes central to improving urban sanitation. In her opening remarks, she touched on the vast differences between the rural and urban milieus, a gulf brought into sharp relief in the sanitation context. However, this difference is an opportunity for practitioners, researchers and policy makers to exchange ideas between the two and learn from the successes and setbacks in each context. Given that the panel comprised individuals from both the rural (Joe Madiath from Gram Vikas) and the urban (Parveennisa Sheikh from Mahila Milan), she remarked that this should be the framework for the discussion.

Parveennisa Mohammed Razi Ahmed Shaikh started the session by sharing an account of her engagement with Mahila Milan and National Slum Dwellers Federation, which had been a critical agent in bringing her family access to an individual toilet. Growing up on the footpaths of Mumbai, Parveennisa had to defecate along the railway tracks. This practice was fraught with danger due to the constant threat of sexual predators. As a precautionary measure she would avoid eating or drinking in excess and refrained from going to the tracks after dark, illustrating how lack of access to basic sanitation can have appalling ramifications. Things turned for the better after she was introduced to the organisation. She now lives in a flat that is equipped with an individual toilet and considers this one of her greatest achievements, for her family no longer has to stand in queues every morning. With the coming of the individual household toilet, her daughter is no longer hesitant to invite friends over. Parveennisa also shared accounts of her

engagement in community building as a member of the organisation. She noted that cynicism has always been a great deterrent in gaining the trust of slum dwellers as they have repeatedly been failed by NGOs, the bureaucracy and politicians in the past; hence a *jhopdiwala* is perpetually suspicious of the intent of outsiders. However, on a brighter note, she exuberantly shared that her prolonged engagement with the organisation has turned her into an outspoken woman who can confidently interact with ministers and expressed the view, based on her experiences, that understanding the challenges, practices and needs of slum dwellers was essential if they were to be effectively engaged.

Haushila Prasad Mishra, whose organisation (Kamdar Swasthya Suraksha Mandal) is dedicated to the improvement of working conditions in the industrial and sanitation sectors, opined that cleanliness and sanitation had become something of a blindspot in contemporary India. He differentiated between two types of sanitation workers – those who sweep the garbage and clean roads and those who are responsible for cleaning septic tanks, drains and dry latrines.
The lack of government commitment to the condition of sanitation workers was a theme running through Mr. Mishra's talk. Even when the rules on manual scavenging were being framed, the government and parliamentary bodies found it easier to pass the rules without debate rather than engage in an understanding of the challenges. In Mr. Mishra's view, this stems directly from a lack of true awareness. He is currently working on a report that he hopes will be a comprehensive summary of the conditions in which sanitation workers work and live. One aim that this might accomplish is to have sanitation workers recognized under the Employees State Insurancce (ESI) Act.

Ranjan Kumar, a practitioner working on rural and urban sanitation in Bihar, felt that since the launch of SBM, Chief Minister Nitish Kumar had been actively working towards the success of the policy in the state, with water, drainage and sewerage being the key concerns. In Patna, the state government aims at building 7000 toilets that will primarily cater to the needs of some of the most marginalised citizens who live in slums. However, a key roadblock in the implementation of the scheme has been the question of land. Since slum dwellers have no tenure, the proposal cannot be enacted on the grounds that it flouts legal norms. Moreover, most cities in Bihar lack a Master Plan, thereby making implementation difficult. The inability of the state to resolve how the funds for the construction of toilets are to be generated, for the public coffers have been deeply impacted by the recent alcohol ban and demonetisation, is a further deterrent. In addition, the need for drastic improvements in water supply is overlooked, even though it is the most basic requirement for the success of sanitation schemes. In summary, Ranjan Kumar advocated for decentralised water supply for efficient coverage and called for greater synthesis between policy and legal frameworks for the success of schemes like SBM.

Pradeep Narayanan, who is involved in the implementation of WASH in rural and marginalised schools, admitted that achieving safe and hygienic water and sanitation in schools is just one aspect of improving the educational environment for children. In focusing on marginalised and rural schools, Plan India upgrades the existing infrastructure by ensuring constant water supply and building separate toilets for boys and girls, among other things. The four main pillars of WASH in school programs are: building capacities, creating replicable models and scaling-up, promoting gender equity, and advocacy. The first pillar emphasises children's participation and ownership in the construction of infrastructure. The second rests on scaling up the idea of

upgraded infrastructure to different schools while the third reinforces the idea of gender equity in sanitation and of sanitation and water access being a basic human right. Under advocacy, the children become the agents of change as they advocate for this movement to gain a broader footing. Key to the takeaway from this segment of the session was the power that community-led processes (including communities of children and students) can have in both in-situ and ex-situ WASH improvements.

Joe Madiath broadly shared his learnings from the rural sphere and how they could be implemented in the context of urban sanitation. He noted that the rural is devoid of the idea of 'public sanitation' and individual household toilets are the norm. Resonating with Kumar, Madiath also stressed that sanitation can never be a success without adequate and dependable water supply. To this caveat he added the caution that the proximity of the water source to the consumer was equally important; sources that were far from the settlements they served added to the drudgery of women, who are pressurised to carry water for the entire family. Drawing from his learnings, he shared that people would rather defecate in the open next to their settlements than travel to distant locations that had the advantage of being supplied with water. In a concluding note, he condemned India's misplaced priorities, whereby funding war missiles was given more importance than the ongoing sanitation crises. In his view, SBM has focused on sloganeering rather than ensuring that open defecation is effectively eradicated. More emphasis is laid on increasing the count of toilets than on facilitating usage. Furthermore, he criticised the state's lackadaisical attitude towards the transformation that is needed in community behaviour and the poor funding of efforts geared towards behavioural change.

Amita Bhide spoke of how citizenship is being redefined by the local state and the not-so-subtle line between the idea of sanitation as a right and criminalising practices born of lack of access to sanitation infrastructure. Key to the relationship between state and citizens is how the state defines citizenship – Ms Bhide remarked on how lack of property ownership becomes equivalent to lack of citizenship and consequently excludes some population segments through lack of service provision.

At the same time there is the illusion of inclusion through employment, by having certain castes perform types of 'waste work' that operate on the idea of providing 'opportunity', while in reality perpetuating exclusion from real opportunities. Therefore, under the current regime of neoliberal politics and policies, one must question whether contemporary government schemes dealing with public goods provision are really about universal access or about redefining the relationship of a state with its citizens.

While one can see toilet provision as a state fulfilling its duty and hail the introduction of new technologies and innovations, the pattern of that provision must also raise questions. Especially in the case of a fractured society which characterises our urban environments, when these technologies and services serve only to reinforce and deepen these social cracks and result in the criminalisation of sanitation rather than the provision of it, the true meaning of the social contract is lost and the idea of citizen participation becomes a façade for an incriminatory form of society.

Bezwada Wilson, winner of the 2016 Ramon Magsaysay Award in recognition of his 'moral energy and prodigious skill in leading a grassroots movement to eradicate the degrading servitude of manual scavenging in India [and] reclaiming for the dalits the human dignity that is their natural birthright', ended the session by explaining that the way in which schemes like SBM were designed resulted in a reductionist approach to the question of sanitation, as evidenced by the single-minded focus on constructing toilets. Citing the inherent contradiction between centralised planning and localised implementation as the root cause of this, he went on to assert that sanitation was about much, much more than constructing toilets. What about, for instance, the many different kinds of toilets that already exist? Some of these are dry latrines and some are community dry latrines. Scavengers are employed by municipalities and gram sabhas to empty these of excreta (1.6 lakh of them women), a practice that is illegal and can only be ended when these kinds of latrines are destroyed – but there is no commitment to such a goal. Moreover, where there are flush toilets, there is more often than not no underground drainage (not one city can boast of 100% coverage); consequently, manual scavengers are forced to climb into septic tanks to clean them and many of them die in the process. This creates a situation in which the construction of toilets without addressing the problems of those who clean them (all of whom belong to the lowest castes) only adds to their problems, because they have more toilets and septic tanks to clean. It is the same case, he stressed, with the Indian Railways – no matter how many new types of toilets they announce, the waste still finds its way onto the railway tracks when the train comes to a halt at a station, and this waste is cleared manually.

Even though SBM does include a commitment to eradicating manual scavenging, there is no precise plan on how to achieve this. The budgetary allocation from the centre for the rehabiliation of manual scavengers is manifestly inadequate and the issues of caste and gender that are so central to the occupation are not addressed. In Mr Wilson's view, no government of India has been able to address these issues in a way that gives manual scavengers a hope of a better future; until this happens, no sanitation initiative can hope to succeed.

Discussion

In the open discussion that followed, the questions raised by the audience focused on three main areas:

- Improving the conditions of work for sanitation workers, so that those from other castes would come to see it as the skilled work it is and as an avenue for employment. In connection with this, some members of the audience also asked why technological innovations that could replace manual scavenging were not being used on the ground.
- Putting the spotlight on issues of gender safety within the larger discourse on public toilets. Not only is the practice of open defecation fraught with dangers for women, who are forced to do it at night and are often assaulted and harrassed in the process, but public toilets are unsafe too.
- Considering alternatives to the target-oriented approach that is currently in place, because a variety of penal measures had been adopted by local authorities in order to meet those targets, such as withholding rations and pension payments pending the construction of toilets by individuals/households and arresting people for practicing open defecation.

Haushila Prasad Mishra pointed out that machine-led practices, which by Supreme Court and High Court directives should have replaced manual scavenging, are not being adopted because local authorities see no reason to – there is no fear of backlash arising from omission. He agreed that targets are extremely dangerous, because they increase the burden on sanitation workers, and expressed the opinion that organised social movements were the only way to put pressure on the government to bring about real change.

Amita Bhide addressed the issue of safety in and around public toilets. She first raised the point of where the toilets are located. At present, the model is supply-led, wherein toilets are constructed wherever possible. In the communities she has worked with, toilets were to be found only along the peripheries, increasing risk levels. Her suggestion was that there was no option but to focus, in cities with ever-growing population densities, on individual toilets and restricted-use toilets for 4-5 households. This would demarcate responsibilities clearly, rather than leaving toilet maintenance to the large, undifferentiated, nameless and faceless 'public'.

Bezwada Wilson criticised any efforts to describe manual scavenging as a 'skill'. He took exception to the glorification of 'cleaning others' excreta by carrying it on your head', an occupation that had been forced upon those considered 'untouchable' by the higher castes, and debating wages and working conditions was out of the question, because the act itself is banned. In his view, no further discussion was possible until the ban was comprehensively implemented and sanitation workers were compensated and rehabilitated in every way.

Technical Session II
Beyond Public Networks – Social Innovation Underlying Technical Solutions

Renu Khosla started the second technical session by articulating the ideas that for her encacpsulated 'living on the edge': living without land tenure, which often makes people 'unlocal', or 'unentitled to accessing decent basic services'; living in environmentally degraded areas, which though close to a place of work, would still mean residing in a bad environment; being physically relocated to the edge of a settlement because of which they remain outside of the urban infrastructure grid; systemically sustained lower-quality service provision, generally a municipal legacy handed down for generations; and not being a part of processes of design, planning and implementation.

She then highlighted a few of CURE's innovations that focused on ways to facilitate inclusion and involvement of the affected communities. The innovations were:

- Microfinancing – In Agra, CURE used a Mughal heritage walk, which was also a livelihood opportunity for the poor, as a community development fund for the operation and maintenance of the wastewater system they had been constructed in the peri-urban areas of the city. While CURE had been able to bring the community on board with the idea, they had not been able to make the community a part of the planning or decision making process.

- Participation – In a resettlement colony at the edge of Delhi, after going by the participation rulebook, i.e., developing street comittees and forming operation & maintenance systems for the management of the sewerage system, CURE learned that people begin to negotiate only after they see the infrastructure. Empowerment can thus often be a double-edged sword, because now the community began to insist on access to all information, some of which the organisation had not shared with them earlier. Another issue that came up was of some residents expressing displeasure because they had not benefited from the pilot project due to it having been undertaken in only half a block.

- Contributions from the community – Instituting a model that insisted on people contributing one-third of the required money, which was managed by their own banking system, led to the people being more concerned because they had invested in it. All decisions regarding management of the system were community-led, and CURE felt that even after it left the area, the system would remain in place.

- Negotiation – In one of its projects, CURE had negotiated a deal with residents, offering to build a sewer line for them, but only after 80% of residents had built toilets.

- Building self-reliance and resilience – In a rainwater harvesting project, CURE stressed on the scant nature of resources and emphasised that the community was responsible for production, utilisation and saving of resources. People skipped their daily work to oversee

the project, a sea change from the understanding that contribution can only be seen as labour.

The conclusion was clear that social innovation depends on people's participation. For participation to become truly possible, ideological acceptance through thorough-going institutional reforms is required at the state level.

Pratima Joshi stated that one of the largest realisations for Shelter Associates (SA) in their 16 years of work in urban sanitation had been that household toilets are the most sustainable solutions. Their flagship programme, One Home, One Toilet, emphasises the importance of data gathering and community mobilisation.

Availability of data provides knowledge about the number of houses, their types, and the target audience. Data often becomes a basis for action. In Pimpri Chinchvad, for example, SA realised that in 58 slums surveyed, residents of 36 slums were defecating in the open because the community toilet-to-person ratio was very high. The block itself was badly maintained and unusable. At that time, the municipality was not privy to this information. Data also acts as a monitoring tool. When SA stared working in one of Pune's largest slums (population 2000+), barely 90 households had access to toilets, while the rest were dependent on four community toilets. Over the years, SA and contractors have worked to bring the ratio down from 1:99 to 1:27.

One of the myths associated with data is that the process of collection is time-consuming and expensive. Ms Joshi clarified that, when compared to the gains they have leveraged from the process, the costs have been a miniscule 1.5% of the total. In the case of Navi Mumbai, SA conducted surveys (as part of a pilot) with approximately 6500 families across 10 slums, which

allowed them to leverage Rs 6.36 crores in terms of infrastructure. In this process, the cost of collecting data was a mere Rs 10 to 15 lakhs.

Community mobilisation creates a sense of ownership amongst the people. People should be seen as contributors to the process, which is promoted in cost-sharing models rather than by providing grants in instalments (as in SBM). SA delivers the materials required for construction, but the actual cost of construction is incurred by the families, who supervise the process as well. This system has worked very well and, over time, has been replicated by the Pune Municipal Council (PMC) as well. Over the last nine months, the council has been able to construct more than 27,000 toilets. Empowering communities has also connected them with the government. All of SA's processes involve the ward councillors and municipal heads. Processes like Focus Group Discussions, transect walks and committees for women allow for inclusion and for solutions to be drawn from the community.

Sai Damodaran spoke about the model Gramalaya had instituted in Trichy whereby they had helped a slum with a very high rate of open defecation achieve ODF status in 2 years. The four pillars of Gramalaya's approach are: (i) safe drinking water supply, (ii) constructing household and community toilets with the support of municipalities, (iii) promoting personal hygiene through inculcating habits like handwashing, and (iv) advocating for menstrual hygiene. To promote household sanitation, a three-pronged strategy is recommended: (i) access to information about the dangers of open defecation,the importance of sanitation, the threat of diseases, etc; (ii) technological inputs for appropriate affordable and localised toilets that can work with the given infrastructure; and (iii) linking with financial institutions: microfinance, banking, CBOs, etc.

Mr. Damodaran then presented some of the work being done by Gramalaya in the slums of Trichy. As these slums have very narrow lanes. Gramalaya laid underground lines with support from WaterAid. Even small houses (<100 sq. ft.) have now been connected to sewerage lines. Where space was not available, members were encouraged to use community toilets.

One of the innovations related to community toilets is the formation of women's federations, who, along with SHGs in slums, are federated into networking bodies at the city level. The federation maintains toilets through a pay-and-use system. The model is also used to cross-subsidise other slums where toilets are less successful in terms of use. Additionally, loans are being provided from one SHG to another.

Through surveys, Gramalaya has also identified toilets that are connected to open drains, and are now working with municipalities, CBOs and financial institutions to help these households switch to sanitary solutions. The organisation has created shit-flow diagrams that elucidate how waste is generated and transported but not recovered and treated. In response to this situation, they are now working with IIHS, funded by BMGF, to create an ODF environment in areas of Trichy.

Apart from these innovations, Gramalaya also advocates the adoption of decentralised wastewater treatment systems (DEWATS), the twin-pit model, in which waste is converted into

manure, and EcoSan toilets, which do not need water and recycle nutrients from excreta to create a valuable resource for agriculture.

Manvita Baradi expressed the strong belief that cities need to be strengthened through municipalities and that the role of NGOs is not to replace governments, but to support them. To meet this end, UMC, an organisation comprising of architects, planners and engineers, works on policy reforms and building the capacities of municipal staff and communities.

To make cities cleaner and more liveable, productive and equitable, UMC launched the 'Friends of Cities' movement in 1997, supported by USAID. It began in Gujarat, creating a 'City Managers' Association', which brought together state-level associations of city managers to advocate different ways of working. The movement granted UMC the ability to work with different bodies in the state of Gujarat. It soon spread to 13 other states.

Though UMC works in many areas of water and sanitation, Ms. Baradi's presentation was focussed around the theme of manual scavenging as this was a recent project UMC had undertaken. She explained that despite the 2013 act prohibiting the practice, most municipal bodies were engaging in the following violations: (i) manual cleaning of dry insanitary latrines, (ii) manual cleaning of open defecation spots, (iii) manual cleaning of sewer lines and manholes, (iv) manual cleaning, emptying of septic tanks, and management of faecal sludge, and (v) handling of faecal matter from the floor of bucket toilets.

UMC has worked closely with Ahmedabad Municipal Corporation in the preparation of an action plan to eliminate manual scavenging, and shared the challenges and lessons from this process. One of UMC's suggestions was to create child-friendly toilets; however, design inputs were not taken into account and provision for water were unavailable. As a result, children continue to defecate openly. A critical learning here was that a high amount of energy is required to work with city governments, so that the right actions are taken.

UMC had also been asked to map open defecation spots, and presented data to the municipality identifying 119 such spots. In reaction to this, the city government cordoned off 50 to 100 such areas, in effect shifting the space for defecation rather than eliminating the practice by focussing on provisions that provide required infrastructure. Most cleaners use insufficient basic equipment, which is not in compliance with laws. To address this problem, the municipality utilised a vacuum based technology, which led to compliance on paper, but failed to work in real life situations due to fundamental design flaws, as shown in a video at the conference.

Ms. Baradi acknowledged, however, that Ahmedabad Municipal Corporation readily accepted the need for an action plan and were keen to set up a process. In response, UMC conducted many surveys and came up with recommendations for required equipment and technologies. She also pointed out that the manual on water supply and treatment (CPHU) was lengthy and difficult to comprehend for municipal officers, and UMC had created a summarised version of it.

In conclusion, she highlighted the following processes that need to be looked at, and are covered under the action plan.

- Training/capacity building
- Infrastructure provision
- Process and management charting
- Behaviour change
- Monitoring and evaluation
- Financing

Madhu Krishna described the Bill & Melinda Gates Foundation's (BMGF) realisation that technological innovations cannot work in a vacuum, and that it is necessary to develop a more nuanced understanding of the 'social' so that interventions can be tailored to contexts.

One of BMGF's focus areas has been Faecal Sludge Management (FSM). This is important because to achieve better public health, there is a need to move beyond providing toilets, to actually think about how the massive amount of waste being generated needs to be treated. Each step in the FSM process needs to be handled carefully: containment, conveyance, extraction, transportation, and treatment.

BMGF realises that the value chain highlighted above often breaks. The natural question that arises is: how can the process be simplified and made more robust? They began to look at the 'big breakages' and discovered the biggest break was in the process of transportation, i.e., conveyance. A need was felt for an approach that allowed users to 'flush and forget' without dire consequences.

The process works on the principle, 'treat where the waste is contained'. This removes the need for expensive sewerage and on-site systems like septic tanks, as well as processes of cleaning, including vacuum trucks and manual cleaning. BMGF has designed five such systems, which are being field-tested. The systems treat the waste and yield purified water that can be reused.

All of BMGF's products will be designed at the places where the sanitation value chain breaks for the poor. The value proposition for the poor is now being calculated through detailed studies.

There are currently three product categories:

1. The reinvented toilet (referred to as the 'golden pot'), which allows the user to flush and forget as systems take care of treatment.
2. For systems already installed, an omni-ingestor, which safely extracts without any human touch, or manual requirements.
3. An omni-processor, a decentralised system that will process the waste to 'de-water' it and make it safe for drinking, or for gardening and other uses. The waste is processed into char, which can be used to fertilise soil.

She clarified that for these processes to function properly, the ecosystem would have to provide for:

- Regulations and reinforcements, which involves working with policy makers to make sure that they comply with water and environment pollution.

- Ensuring that households pay and regularly de-sludge.
- Making people pay for pollution and treatment.
- Ensuring quality services by creating the right business opportunities, and treating vaccum truck operators and other service providers as partners. A National Faecal Sludge and Septage Management Alliance has been created and many partners are working to meet its objectives. Women entrepreneurs are a critical part of this.
- Creating products that serve the needs of the poor and marginalised.
- Working on demand generation, behaviour change, and regular communication: the big challenge is ensuring continuous interaction with municipalities and communities, and between them. With rural populations, there are better structures, which make these processes easier.

BMGF's hope, it was made clear, is that leakages can be fixed by increasing the number of partners and problems can be solved with the use of disruptive technologies. Even the developed world is struggling to work with centralised sewerage systems. Ms. Krishna ended by saying that commercialisation with strong private partners is important, as are incremental technologies which allow for slow progress, rather than massive transformations that are difficult to achieve. More donors are also required in the field of FSM since no single body can provide all the required infrastructure. Finally, citizen engagement is what will carry all initiatives from the implementation stage towards success.

Discussion

When the discussion was opened up to invite inputs from the audience, a number of concerns were voiced, regarding not only the specific details of the innovations but also the ecosystem within which they must operate. In the former category, audience members asked about:

- Processes that are involved in data creation
- The nature of modified septic tanks
- The economic viability of digesters

Other questions focused on the enabling conditions for these innovations:

- Taking into account population pressure
- Convincing the masses to install toilets in their homes
- The relationship between urban design and infrastructure
- Water supply issues and the lack of septic tanks

All of these are pertinent considerations. **Madhu Krishna** clarified that growth projections were necessarily factored into any good innovation and that adaptability was an important feature of any ambitious and truly functional innovation, as in the case of reinvented toilets, which could be modelled for single and multiple units. She stressed that social innovation solutions were for the poor, and making them economically viable was a matter of finding commercial partners who could bring down costs by producing in high volumes, a strategy that BMGF had already succeeded with when it came to health products. It was even possible to work around water supply issues, as a lot of their units used recycled water and were thus free from external needs.

On the subject of data creation, **Pratima Joshi** described GIS (geographic information system) as a software that allowed them to integrate the information they collected with existing maps. Using Google Maps as the base, they uploaded information about structures in settlements gathered through household surveys, in a way updating the map with their findings. She also remarked that although regulation septic tanks were too large for certain kinds of settlements where lanes were very narrow, people were willing to go out of their way to install them. They were experimenting with the idea of attaching two septic tanks to each other to make them easier to carry and install. While it is commonly believed and propagated that residents of small houses are not willing to install toilets, the actual levels of demand are quite shocking. To augment this groundswell, she recommended mobilisation models for adolescents, women and men, emphasising the importance of bringing all stakeholders to the table (including ward councillors) and finding recognisable brand campaigners. The first step in solving issues of water and electricity supply, according to her, was data collection, without which several misconceptions persisted. Forexample, in Navi Mumbai, it was assumed that all households had individual water connections, but municipalities were shocked to find a high reliance on community water taps. Along with sanitation, this became another major exercise for the municipalities.

Renu Khosla spoke about different ways of tailoring innovations to given urban contexts, as in the case of heritage walks in Agra, which serve as livelihood opportunities for the poor. Sanitation was incorporated in the design for tourists, because unsanitary spaces are not tourist-friendly. They had also found open spaces in Agra that could be reclaimed for public use and had restored forest slopes in Delhi that had become overrun with solid waste.

Damodaran pinpointed flaws in septic tank design as the source of many problems. They were not constructed according to specifications, both in rural and urban areas; as a result waste water was not properly treated. He said that providing training to masons on how to construct chambers and design inlets and outlets was one initiative his organisation had taken up to address this issue. In urban areas, he advocated connections to sewerage lines, in the absence of which twin-pit toilets with proper septic tank models could be adopted.

Technical Session III:
Way Forward – Scaling-up Innovations for Change

Swamini Adityananda Saraswati started out by illustrating the scale of India's sanitation challenge, especially as a result of open defecation, sharing information about the quantity of bacteria that can be transferred from exposed human excreta and the dire need for India to scale up latrine adoption. She then went onto remind the gathering that over two decades the efforts to clean and rejuvenate the Yamuna and Ganga river systems have not resulted in visible improvements to these rivers. This failure has made it clear that changes involving the everyday behaviour of millions of actors are not easy. According to her, the solution to this behavioural roadblock is for faith-based leaders to promote sanitation and hygiene issues, especially in a country like India, where over 99% of the population follows some faith closely. She then spoke of the activities of the Global Interfaith Alliance, which seeks to bring leaders of different faiths together for precisely this purpose. At the 2016 Kumbh Mela, this alliance worked to provide access to toilets and relayed the message of sanitation to all through repeated references to its importance by the spiritual leadership of the Mela. She concluded by encouraging those involved in the sanitation sector to actively work with faith leaders to take the initiative forward.

Sheela Patel spoke about her experience of working in Mumbai, where lack of access to sanitation is an old problem that is refusing to budge. However, there are ways to address it. She recalled how between 1984 and 1990 even the public toilet complexes that were built were not accessible as they became socioeconomic spaces from where the money lender operated. The desirable strategy going forward, she said, would be to engage and support the women from Mumbai's slum communities (who understand best the difficulties of access to sanitation in slums) to become sanitation contractors, who would build toilets and toilet block complexes. Ms Patel introduced Ms Ramani and Ms Sheikh, two women entrepreneurs who started from humble backgrounds and without ready access to latrines, but are now successful contractors who undertake work to build and operate latrine complexes in Mumbai and even other cities in Maharashtra. Security of tenure and proactively setting apart a portion of Mumbai city's budget for improving sanitation would help women SHG-led initiatives to improve access to latrines in Mumbai.

Deepak Sanan pointed out that when thinking about urban sanitation in India the first thought that occurs to him is the need to adapt CLTS (community led total sanitation) approaches. He pointed out how sanitation is a public good and community-based approaches are critical for realising the goals in urban sanitation as well. He felt the New Delhi declaration (1990) of 'Some for all, rather than more for some' should be amended to 'All for all' in the context of sanitation-related work. The vision, objectives and approach laid down in the National Urban Sanitation Policy remain solid and relevant, but are not often invoked in our approach to urban sanitation. He would continue speaking to bureaucrats and government agencies on prioritising sanitation and reaping multiple benefits from it, with decentralisation being a major focus of his engagement. He noted that the country cannot plan and fund sanitation from New Delhi or for that matter any one city. The approach should be to encourage states and empower cities to take up urban sanitation. To facilitate this, what the centre could do is institute regular data

collection on all aspects of sanitation and publish the results as an index, which in turn will motivate states and cities to prioritise sanitation.

Jagadananda was of the opinion that the critical challenge is to develop an understanding among the people that public works are undertaken for them and that they should actively contribute by monitoring its implementation, thereby improving accountability. He recalled a few public works projects from Odisha, where citzens contributed their time and even technical expertise in monitoring public work projects, to great success. He concluded by stressing that urban sanitation planning in India should incorporate disability friendliness and disaster preparedness vis-à-vis floods.

Rajesh Tandon, who moderated the session, concluded it by noting that one of the takeaways from the day's workshop was that promoting knowledge sharing between CSOs working in the field of urban sanitation was of paramount importance. He drew attention to the usefulness of decentralisation in this context, suggesting that regular workshops be organised away from Delhi, in regional centres around the country. Furtheremore, evidence of what works is often communicated in conferences and case studies after a significant time lag, thus compromising the enthusiasm of other agencies to emulate the innovation. The larger conversation must be a continuous rather than a sporadic one and effort should be made to extend it to donor agencies and other implementation organisations working in sanitation, in order to identify key focus areas that could guide the sector as a whole. For this, academic research into urbanisation, urban policies and urban design in India needs to be encouraged in a big way, which in Mr Tandon's opinion was another issue that the gathering at the conference needed to think about.

Discussion

The following observations were made in the open discussion that followed the panellists' remarks:

- Initiatives and innovations should be assessed for replicability. It may be useful for research and academic institutions in the space to work on how such assessments can be conducted.
- In this connection, it was also suggested that replication be approached with some trepidation in conversations with government, as history suggests that pioneering community-based initiatives have seldom been replicated by government. No two communities are the same; therefore, it may be worthwhile to think about lessons and learnings rather than replication.
- Entrepreneurs have a huge role to play in building the requisite infrastructure and services in improving urban sanitation levels. But very little effort has gone into understanding their requirements and engaging with them. This was an area that deserved urgent attention: reinvigorating supply.
- It is important to study and understand the communication strategies that were successful and to share this knowledsge in the sector.

National Conference on
SOCIAL INNOVATIONS FOR IMPROVING URBAN SANITATION: LESSONS FOR SCALING-UP

14 December, 2016
The Theatre, India Habitat Centre, New Delhi
Programme Agenda

TIME	SESSION

09:30 – 10:00   **REGISTRATION OF PARTICIPANTS**

10:00 – 11:10   **INAUGURAL SESSION**

❖ Welcome and Introduction by Shubhagato Dasgupta, Senior Fellow, Centre for Policy Research (CPR)
❖ Presentation by Kaustuv Kanti Bandyopadhyay, Director, Society for Participatory Research in Asia (PRIA) and Anju Dwivedi, Senior Researcher, Centre for Policy Research (CPR)
❖ Address by Johann Hesse, Head of Development and Cooperation, Delegation of the European Union to India
❖ Address by Sindhushree Khullar, Former CEO, NITI Aayog
❖ Setting the stage for conference deliberation by Rajesh Tandon, Founder and President, Society for Participatory Research in Asia (PRIA)

11:10 – 11:30   **Tea / Coffee Break**

11:30 – 13:10   **TECHNICAL SESSION I: EQUITY AND SOCIAL CHANGE – CENTRAL TO IMPROVING URBAN SANITATION**

Moderator: Sheela Patel, Executive Director, Society for the Promotion of Area Resource Centre (SPARC)

Panellists
❖ Parveennisa Mohammed Razi Ahmed Shaikh, Mahila Milan and National Slum Dwellers Federation (NSDF)
❖ Haushila Prasad Mishra, Director, Kamdar Swasthya Suraksha Mandal
❖ Ranjan Kumar Singh, Programme Director, Nidan
❖ Pradeep Narayanan, Director, Programme Strategy and Policy, Plan India
❖ Joe Madiath, Founder, Gram Vikas
❖ Amita Bhide, Professor, Centre for Policy and Urban Governance, School of Habitat Studies, TISS

Open discussion - facilitated by the Moderator

13:00 – 14:00   **Lunch**

14:00 – 15:30   **TECHNICAL SESSION II: BEYOND PUBLIC NETWORKS: SOCIAL INNOVATION UNDERLYING TECHNICAL SOLUTIONS**

Moderator: Shubhagato Dasgupta, Senior Fellow, Centre for Policy Research (CPR)

Panellists

- ❖ Renu Khosla, Executive Director, Centre for Urban and Regional Excellence (CURE)
- ❖ Pratima Joshi, Executive Director, Shelter Associates
- ❖ S. Damodaran, Founder and Director, Gramalaya
- ❖ Manvita Baradi, Director, Urban Management Centre (UMC)
- ❖ Madhu Krishna, Senior Programme Officer, Water Sanitation and Hygiene, Bill and Melinda Gates Foundation (BMGF)
- ❖ Bezwada Wilson, National Convenor, Safai Karamchari Andolan (SKA)

Open discussion - Facilitated by the Moderator

15:30 – 15:50   **Tea / Coffee**

15:50 – 17:15   **WAY FORWARD – SCALING-UP INNOVATIONS FOR CHANGE**

Moderator: Rajesh Tandon, President-Founder, Society for Participatory Research in Asia (PRIA)

Panellists

- ❖ Swamini Adityananda Saraswati, Director, Programmes, Policy and Development, Global Interfaith WASH Alliance and Ganga Action Parivar, Parmarth Niketan Ashram
- ❖ Jagadananda, Founder, Centre for Youth and Social Development
- ❖ Deepak Sanan, Additional Chief Secretary, Govt. of Himachal Pradesh
- ❖ Sheela Patel, Executive Director, Society for the Promotion of Area Resource Centre (SPARC)

Vote of Thanks by Anshuman Karol, Programme Manager, Society for Participatory Research in Asia (PRIA)

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