SanCoP 21

Addressing the Complexities of Citywide Environmental Sanitation

Synopsis

The 21st meeting of the UK’s Sanitation Community of Practice was held on the 19th of April at the University of Leeds. The aim for the day was to engage participants in considering the links between human excreta management, solid waste management, and surface water drainage, as critical aspects of citywide environmental sanitation. As well as the traditional SanCoP focus, contributions were invited from professionals experienced in other aspects of environmental sanitation. The individual needs of each sector were discussed, and how interdisciplinary approaches have worked or not worked. A lively debate was had on the pros and cons of isolated vs interdisciplinary approaches, and what is required to achieve better outcomes. 2018 also marks 10 years since SanCoP was established! This was duly celebrated with cake cut by some of our longest serving attendees, who have been involved in SanCoP from the start. Special thanks to the University of Leeds for hosting, with excellent support from Dani Barrington and Barbara Evans.

This synopsis and the speaker presentations are available at http://www.susana.org/en/community/integrated-content/sancop-uk

Session 1

Pippa presented a summary of the conference paper Urban Sanitation: where to next? (2017) written by Pippa Scott, Rebecca Scott and Andy Cotton which can be found here: https://wedc-knowledge.lboro.ac.uk/resources/conference/40/Scott-2832.pdf. The paper reviews the history of the sanitation sector, analysing where it has come from in order to set out where it needs to go next. The relatively short history of the urban sanitation sector was highlighted, and a question from the audience noted the sector’s current move away from sewers is relatively recent and may not be a long-term solution. Pippa concluded that to move forward as a sector we must integrate what we’ve learnt about urban sanitation from earlier work, reconsider integrated service provision for the peri-household environment, as sanitation is only one component, and must place sanitation back into the wider human-technology-environment systems of the city.

Claire presented Eau et Vie’s work in Dhaka, where they have established both a local social enterprise and NGO to deliver integrated sanitation services including water supply, solid waste collection and surface water drainage, as well as hygiene training and firefighting. Paid services are provided by the social enterprise and one integrated bill is provided for water supply, waste collection and surface water drainage, with a collection rate of 95% of the fees and only a small percentage defaulting on payments.
The work was well received by the audience, with questions largely focussed on capacity building and phasing. The audience noted that this is still a relatively small scale project, as compared to the scale of the sector and the problem.

Citywide Sanitation in Maharashtra. Meera Mehta, Center for Water and Sanitation (CWAS), CEPT University.
Meera and team presented a video on the work CWAS have been undertaking in Sinnar on Supporting Citywide Sanitation. The team have been working with Local Governments and other stakeholders to develop city sanitation plans that are affordable and deliverable. The work incorporates aspects such as:
- Sanitation financing moving beyond subsidies
- Training programmes for local masons in order to raise the standard of private toilet construction without
Citywide FSM services in Faridpur, Bangladesh: systems challenges of capacities and behaviours. Lucy Stevens, Practical Action.

Lucy presented the work Practical Action have been undertaking across 24 small slum communities in Faridpur, integrating slum upgrading and community-based planning – where faecal sludge management is being delivered linked to wider development priorities. The communities had relatively high toilet coverage, but collection and treatment of waste was almost non-existent. Practical Action made a number of interventions including:

- Work around generating demand for and promoting safe containment of faecal sludge
- Improving the capacity of pit emptiers, including working with the municipal emptying service to lease equipment to the private sector emptiers who provided a preferential service to customers
- Fit out the design and construction of a treatment plant, including a mechanism for payment for emptiers who bring sludge to the treatment plant
- Development of a regulatory framework for FSM

Lucy emphasised that like any large problem, it has taken time and prioritisation to make progress; PA have been working in Faridpur since 2014.

Session 2


Costas presented on the interactions between solid waste and water resources in the urban environment, highlighting issues around waste collection, types of waste, and emphasising the impact of waste on the marine environment. The issue of solid waste in pit latrines is well known in the sanitation sector but it is by no means the only interaction – solid waste frequently blocks drains causing issues with flooding and public health, and waste management facilities frequently create a direct route to rivers or the sea. Costas emphasised the scale of the problem. 2 billion people don’t have sound waste collection and 3 billion don’t have sound disposal for SW. Without proper collection and disposal, waste will continue to enter water bodies. Waste is destroying value of ecosystems in multiple ways including social, environmental, financial, and human health.

Addressing the complexities of faecal sludge and solid waste management in urban environments. Dan Ratcliffe, Loowatt.

Dan shared Loowatt’s work delivering waterless toilets and the whole sanitation value chain, and shared their experiences with solid waste management. The waste from toilets is not just faecal sludge, but includes solid waste elements such as toilet paper and materials associated with menstrual hygiene management. Therefore solid waste management is integral even if toilets are used as designed. Dan noted that water utilities around the world have issues with solid waste management and commonly screen wastewater down to 6mm to remove waste and other solids prior to treatment. Loowatt are working to leverage systems already in place in locations where they are working to provide toilets, and apply these systems to solid waste management – systems such as IT tracking for toilets, as well critical relationships and issues around urban planning such as land tenure.

The challenges of urban drainage. Christian Beretta, University of Leeds.

Christian presented on the challenges of urban drainage, the interactions between humans and the natural water cycle, and how rapid urban development and climate change are coinciding to increase the risk of frequent flooding and major pollution incidents. Christian noted the relatively recent move away from traditional flood risk management towards a sustainable urban drainage approach has been found to be cheaper and more effective at delivering the desired outcomes, though there are still relatively few examples of SUDS in a development context – the best currently is probably the work of KDI in Kibera. A recent project looking at climate risks to Kenyan infrastructure, while primarily focussed on roads and railways, highlighted the lack of drainage asset data, lack appropriate climate data, and the impact of rapid urban development on urban planning, as well as insufficient understanding of the impact of interventions on up- and downstream areas. The lack of robust data means modelling, where undertaken, can be of limited value.

Session 3

Safety exposure performance framework. Eve McKinnon, UCL

Eve presented her work developing a performance tool looking at exposure to faecal pathogens, which has a focus on controlling the factors that result in human exposure from container based sanitation. Eve considered how this
could be applied to other aspects of citywide sanitation. The current models in place are linear and don’t reflect reality. Eve’s work noted four principle mechanisms that bring about exposure:

- Human error
- Equipment or technical failure
- Regulatory or system failure (“safety culture”)
- Seasonal or environmental factors (flooding, epidemics, etc.)

Eve noted that it is critical to identify vulnerabilities within the system, such as young children and frontline workers. The safety exposure performance framework is a way of considering factors across the system, and therefore should be able to be applied to other systems.

**Critical interdependencies in urban systems and urban health risk propagation. Celia Way, University of Leeds.**

Celia introduced her presentation emphasising the need to focus on service level approaches rather than just infrastructure within sanitation, and that cities are complex places that are constantly changing – sector integration is necessary as there are always limited resources. Blending resources between departments can sometimes lead to multiple benefits from one intervention. However, compartmentalisation does still occur – often around funding, as many organisations are single-issue focussed. Celia considered the propagation of risk through an urban environment; using the example of flooding – the downstream neighbourhood that experiences flooding issues is influenced by all the upstream catchments.

Celia noted that in terms of ability to get things done within a stakeholder organisation such as Local Government, attitude and willingness are often more important than precise job title. The issue of prioritisation and timescales was also discussed, models for prioritisation do exist, often economic or focused on disaster risk management (cascading failures), but these stem from situations with fixed infrastructure and good data. Other actors were also discussed, such as the tourism industry, which can provide an alternative entry point to delivering interventions. Celia concluded by noting that climate change as a topic is currently allowing separate technical areas to come together and think holistically about city needs, and can interest other stakeholders (e.g. the insurance industry).

**Debate & Group Discussions**

Four contributors argued for and against the motion “This house believes that management of human excreta should be implemented alongside all other aspects of environmental sanitation” [Note that debaters were assigned the side of the debate, and don’t necessarily support or oppose the motion]. Arguing for the motion were Tracey Keatman (Independent Consultant) and Sally Cawood (University of Leeds). Arguing against the motion were Duncan Mara (University of Leeds) and Fiona Zakaria (University of Leeds).

A lively debate ensured, expertly chaired by Barbara Evans. A few of the points to emerge from the debate, audience participation and group discussion were:

- Overlaps between aspects of environmental sanitation were acknowledged as critical, such as the impact of water contamination on the local environment, solid waste in pit latrines, etc.
- Other overlaps include service delivery models, housing and land tenure issues, (there is a longer list).
- People do not view these systems as separate from a user perspective. The focus on people, what they want and why was emphasised – this is sometimes forgotten. Finding the right entry points increases the success of interventions, and co-benefits can be significant when cities are considered holistically.
- There is always going to be a limit in terms of how much we can do and how quickly, we don’t have unlimited resources (time, staff, money). Through prioritising we can achieve more than if we try and solve everything. Management of human excreta is considered most critical to development, following water supply, therefore it is right to focus on this at the expense of some other issues.
- Can we use ‘(technical) translation’ to ensure that we are speaking the right language to work with other sectors?
- Could sanitation ‘piggyback’ on water supply, to deliver better outcomes through integration?
- Do we need to be more ambitious, and identify cities that are ready to deliver an integrated solution?
- Do we focus too heavily on services, and ignore long-term environmental impacts?
- Can we consider more the role of the private sector, and learn from experience around contracting methods used such as public–private partnerships?
- Can we better understand the financing models in places where sanitation has been delivered, to enable us to deliver more and at scale in other places?