

URBAN SERVICES INITIATIVE [USI]

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J-PAL MATCHMAKING CONFERENCE CAPE TOWN, SOUTH AFRICA 10TH-12TH JANUARY 2013





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DAY ONE

11:30am – 1:00pm	Registration and Lunch
1:00pm – 1:15pm	 Conference Inauguration Welcome from J-PAL Africa - Kamilla Gumede, Executive Director, J-PAL Africa Overview of the Conference - Jasmine Shah, USI Initiative Manager
1:15pm – 3:00pm	Measuring Impacts: A discussion on why we should care about measuring impacts, how to measure impact, and introduction to randomised evaluations - Iqbal Dhaliwal, Global Policy Director, J-PAL
3:00pm – 3:30pm	Coffee Break
3:30pm – 5:30pm	 Group Work: Theory of Change, Research Questions Participants, assisted by J-PAL staff, will: Discuss the theory of change, indicators and core research questions for their USI relevant interventions/programmes. Discuss the slides that will be presented during the Egg-timer session at 11:15 am on January 11.
5:30pm – 6:30pm	Networking Break
6:30pm – 7:00pm	Urban Services Initiative (USI) • Introduction to USI and Matchmaking - Mushfiq Mobarak, Associate Professor of Economics, Yale University and USI Co-chair • Sectoral priorities for BMGF - Radu Ban, Program Officer, Bill & Melinda Gates Foundation
7:00pm – 7:30pm	Keynote Address
7:30pm – 9:30pm	 Welcome Dinner for Conference Participants A sit-down dinner with implementing partners, researchers and a J-PAL staff member assigned to each table. The pairing will be the same for Break-out session 1 on January 11. Objective: Informal introductions and an open discussion on the value of randomised impact evaluations.

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8:00am – 9:00am	Breakfast
9:00am – 10:00am 9:00 – 9:30 9:30 – 10:00	Evidence and Research Priorities: Sebastian Galiani, Professor of Economics, University of Maryland and USI Co-chair • Presentation of the USI Review Paper • Q&A
10:00am – 10:45am 10:00 – 10:15 10:15 – 10:30 10:30 – 10:45	 Joint Researcher and Practitioner Presentation: WASH-related impact evaluation in practice Structuring the Faecal Sludge Management Market in peri-urban Dakar Molly Lipscomb, Assistant Professor of Economics and Public Policy, University of Virginia Dr. Mbaye Mbeguere, Coordinator - Faecal Sludge Management project, L'Office National de l'Assainissement du Sénégal (ONAS) Q&A
10:45am – 11:15am	Coffee Break
11:15am – 1:00pm	Short (Egg-timer) Presentations by Implementing Partners on their Programmes that might fit with USI • 13 organisations, 5 min per organisation
1:00pm – 2:00pm	Lunch
2:00pm – 2:10pm	Instructions for Matchmaking Break-out Sessions: Laura Costica, USI Africa Research Manager
2:10pm – 3:30pm	Break-out Session 1: During this session, researchers and implementing partners will be paired according to their previously stated interests, and requests to meet specific people/organisations that were submitted prior to the conference.
3:30pm – 4:00pm	Coffee Break + Researchers sign-up for Break-out Session 2 Based on the information received by researchers in preparation to the conference, the Egg-timer session and Break-out Session 1, <u>researchers</u> will sign up for appointments during Break-out Session 2. They can decide to follow up on a previous discussion or set up a meeting with a different organisation.
4:00pm – 5:30pm	Break-out Session 2: This session will have the same structure as Break-out Session 1. Based on appointments requested by researchers, J-PAL will pair researchers and implementing partners to discuss potential partnerships.

DAY THREE

8:00am – 9:00am	Breakfast
9:00am - 10:00am 9:00 - 9:30 9:30 - 10:00	Randomised Evaluations in Practice: <i>Esther Duflo, Abdul Latif Jameel Professor of Poverty Alleviation and Development Economics, MIT and USI Co-chair</i> • Experiences from the field • Q&A
10:00am – 11:00am	 Short (Egg-timer) Presentations by Researchers on their areas of interest 12 researchers, 4 minutes per researcher
11:00am – 11:30am	Coffee break + Implementing Partners sign up for Break-out Session 3 Based on the previous Egg-timer session and the interactions so far, implementing partners will sign up for appointments with researchers during Break-out Session 3. They can decide to follow up on a previous discussion or set up a meeting with a different researcher.
11:30pm – 1:00pm	Break-out Session 3: Based on appointments requested by implementing partners, J-PAL will pair researchers and implementing partners to discuss potential partnerships.
1:00pm – 2:00pm	Lunch
2:00pm – 3:30pm	Break-out Session 4: Researchers and implementing partners can continue their meetings, based on joint requests. <i>or</i>Group work: Researchers and implementing partners who have agreed to collaborate on a project(s) can prepare joint presentations for the final session.
3:30pm – 4:00pm	Coffee break
4:00pm – 5:30pm	Preliminary Ideas: Joint Researcher and Practitioner presentations Joint researcher and practitioner presentations from newly formed teams on budding ideas. Participants will present a research and evaluation plan, and seek feedback.
5:30pm – 5:45pm	Concluding Remarks

ABOUT USI

The **Urban Services Initiative (USI)**, managed by J-PAL and funded by the Bill & Melinda Gates Foundation, identifies and evaluates innovative solutions to the problem of inadequate access to water, sanitation and hygiene (WSH) for the urban poor in Africa and Asia.

The initiative aims to understand and address important barriers to the urban poor's access to needed services, including collective action failures, politician incentives and other political economy constraints, low willingness to pay for services, and difficulties arising from the presence of a mix of transient and permanent populations.

USI MAIN GOALS

I. Spur innovative projects that can address the challenge of delivering urban public services, and use randomised evaluations (REs) to test the effectiveness of those innovations in the field.

2. Form strong research teams including multidisciplinary teams and increase capacity for some researchers based in developing countries to design and conduct REs which test the effectiveness of their proposed solutions rigorously. Enhance their ability to think about the multi-disciplinary nature of the challenge so that any behavioral, institutional and technological aspects of the problem are addressed simultaneously. 3. Disseminate knowledge gained to policymakers and donors at local, national, and international levels, so that effective solutions are promoted and scaled up.



USI'S APPROACH

The strategic focus of the Urban Services Initiative is to identify and rigorously test innovative micro- and mediumscale solutions to the problems of inadequate access to water, sanitation, and hygiene in urban neighborhoods of developing countries. Micro-solutions may range from supporting an individual trash collection enterprise through microcredit, to building community toilets and addressing the collective action issues and improving the management of toilets, drainage, et cetera. While USI recognizes the great potential benefits of large infrastructure overhaul if and when it is possible, USI focuses on smaller-scale solutions. Innovations that augment existing infrastructure with process or access improvements are also a part of this initiative.

ABOUT THE USI MATCHMAKING CONFERENCE



The Urban Services Initiative at J-PAL will provide mediumto large-scale research funding to conduct rigorous impact evaluations of innovative programmes with the potential to improve public service provision for the urban poor. Such projects will use the methodology of randomised evaluations to evaluate programmes implemented in the field, and will pair leading economists with government and nongovernmental organisations that have implementation capacity.

The USI Matchmaking Conference is designed to forge such partnerships between researchers and implementation agencies. The conference includes presentations by academics and sector experts on important open questions on urban service delivery, as well as break-out sessions in which researchers and practitioners who share similar regional and thematic interest can discuss and map out opportunities for collaboration. Through the break-out sessions, organisations will receive structured guidance from academic experts on how to build randomised evaluations into the design and execution of their specific programmes.

By means of this structured interaction between academics and practitioners, we expect that the conference will result in teams that can design and evaluate innovative solutions to the problem of inadequate access to water, sanitation and hygiene services in low-income urban neighbourhoods. The teams of researchers and practitioners that are formed during this conference can then compete for funding from a Request for Proposals (RFP) that is issued at regular intervals throughout the three-year lifecycle of USI.

ABOUT J-PAL

The Abdul Latif Jameel Poverty Action Lab (J-PAL) was established in 2003 as a research center at the Economics Department at the Massachusetts Institute of Technology. Since then, it has grown into a global network of over 80 researchers who use randomised evaluations to answer critical policy questions in the fight against poverty.

J-PAL's mission is to reduce poverty by ensuring that policy is based on scientific evidence, and research is translated into action. We do this through three main activities:

CONDUCTING RIGOUROUS IMPACT EVALUATIONS: J-PAL researchers conduct randomised evaluations to test and improve the effectiveness of programmes and policies aimed at reducing poverty. Our work spans several program areas: agriculture, education, environment, finance, health, governance, and youth and labour markets.

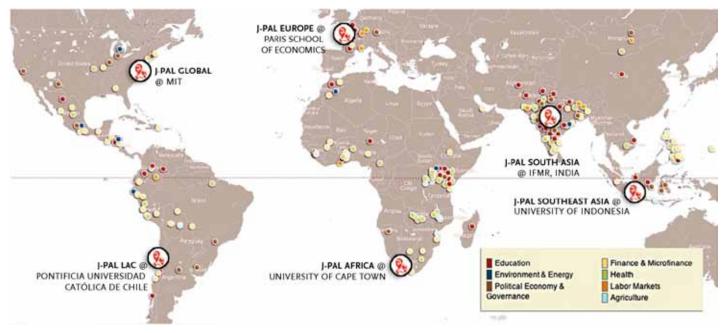
POLICY OUTREACH: J-PAL's policy group analyses and disseminates research results, and builds partnerships with policymakers to ensure policy is driven by evidence, and effective programmes are scaled up.

CAPACITY BUILDING: J-PAL equips practitioners with the expertise to carry out their own rigourous evaluations through training courses and joint research projects.



In addition to our global office at MIT, Cambridge, J-PAL has regional centers in AFRICA at the University of Cape Town (Cape Town, South Africa); SOUTH ASIA at the Institute for Financial Management Research (Chennai, India); EUROPE at the Paris School of Economics (Paris, France); LATIN AMERICA AND CARIBBEAN at Pontificia Universidad Católica (Santiago, Chile); and SOUTHEAST ASIA at University of Indonesia (Jakarta, Indonesia). J-PAL's regional offices coordinate evaluations of development programmes and actively work in capacity building and policy outreach.

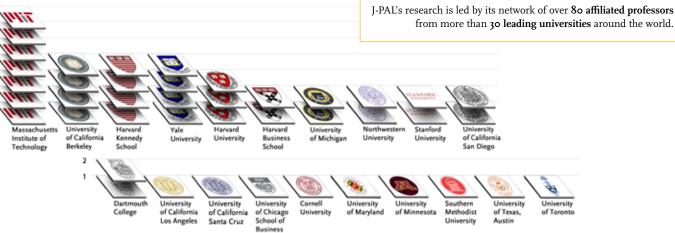
J-PAL PROJECTS AROUND THE WORLD



J-PAL's network of affiliated professors has more than 350 ongoing and completed randomised evaluations in 52 countries.

NORTH AMERICAN UNIVERSITIES

J-PAL'S NETWORK OF RESEARCHERS



EUROPEAN UNIVERSITIES



LATIN AMERICAN UNIVERSITIES



SOUTH ASIAN UNIVERSITIES

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ABOUT J-PAL AFRICA

J-PAL Africa was opened in August 2010 to expand J-PAL's research and policy outreach in sub-Saharan Africa and is based at the Southern Africa Labour and Development Research Unit (SALDRU) at the University of Cape Town.

J-PAL Africa works to improve the effectiveness of social programs in sub-Saharan Africa with the following three-pronged strategy:

- I. Evaluate social programmes to provide scientific evidence on their effectiveness.
- 2. Build local capacity in Africa to conduct randomised evaluations.
- 3. Influence policy by disseminating research results and promoting state or country-wide scale-ups of successful programmes.

Across Africa, J-PAL's network of affiliated professors has more than 115 on-going and completed evaluations in 19 countries across seven research themes: Agriculture, Health, Environment and Energy, Education, Finance and Microfinance, Labour, and Political Economy and Governance. J-PAL works closely with its partner organisation, Innovations for Poverty Action (IPA), to provide research infrastructure in these countries. Within South Africa, J-PAL Africa currently has a portfolio of more than 9 evaluation projects that seek to determine the effectiveness of social programs across multiple research themes. Since its launch, J-PAL Africa has organised multiple Executive Education Courses, "Evaluating Social Programmes." These are intensive training courses aimed to equip researchers and policymakers from African countries with a thorough understanding of randomised evaluations and pragmatic step-by-step training for conducting one's own evaluation. To date, J-PAL Africa has provided training for participants from more than 20 African countries.



J-PAL Africa builds partnerships with state and national governments, NGOs, foundations and international development organisations operating in Africa. Our policy outreach efforts work to scale up proven and effective programmes. With more than 350 evaluations to draw from across the globe, J-PAL is well positioned to share evidence about which policies or programmes work, which do not, and why. J-PAL Africa strives to ensure that the growing body of scientific evidence from around the world can be effectively used to inform policymaking and improve the lives of the poor in sub-Saharan Africa.

WHY RANDOMISE?

It is not always obvious which policy will have the largest impact on intended beneficiaries: What is the best way to increase school participation--incentives for parents, information on returns to schooling, or school inputs? Do quotas for women in politics reduce (or increase) biases against women politicians? What is the most cost-effective way of improving learning in schools? To design good policy, we need to know how well a policy is working and whether it is a good value for the money: Random assignment offers a simple way to generate these insights. In randomised evaluations, individuals are selected to receive a programme based on a lottery. Those individuals who are not selected form a comparison group. Because the selection process is random, the two groups are similar in every respect, except that one group receives the programme, while the other does not.

Therefore if, after the programme is implemented, the group that received the programme has different outcomes (e.g. more or less healthy, or higher or lower test scores), we know that this difference was caused by the programme. This clear attribution of what effects where caused by the programme gives us insights about its effectiveness.

Randomised evaluations are particularly appropriate when programmes are oversubscribed, scheduled to be rolled out in a gradual fashion, or are initially tested with pilot programmes. In those cases, randomisation is one of the fairest ways of determining participation, while simultaneously allowing for rigorous measurement of the effect.



SAMPLE RANDOMISED EVALUATIONS ON **URBAN SERVICES**

1 HOUSEHOLD WATER CONNECTIONS IN TANGIERS, MOROCCO

Households in Tangiers, Morocco have a high willingness to pay for piped water, but while home water connection have no impact on waterborne illnesses, households' self-reported happiness improves substantially.

Researchers: Florencia Devoto, Esther Duflo, Pascaline Dupas, William Pariente, Vincent Pons Partners: Amendis, Veolia Water Location: Tangiers, Morocco Sample: 845 poor home owners Timeline: 2007-2008 Theme(s): Infrastructure, Financial Access

POLICY ISSUE

Households in developing countries spend considerable amount of time fetching water. The time-burden of water collection does not typically spare anyone in the household, but in many countries it is borne primarily by women and girls. This burden generates considerable stress and tension both within and between families. Most interventions to connect poor households to the drinking water network are primarily concerned with improving physical health. Yet, over and beyond its direct effect on physical health, improved water access could have important effects on the household well-being. A water connection could be welfare-improving:



CONTEXT

In urban Morocco, the setting of this study, households that rely on public taps spend more than seven hours a week collecting water, despite a relatively high density of water taps. In our sample, 65% of households without a water connection report that water is a major source of concern, 15% have had a water-related conflict within the family and 12% with their neighbors; thus, both within the family and between families, water seems to be the primary source of stress and tension.

DESCRIPTION OF INTERVENTION

J-PAL worked in collaboration with Amendis, the local affiliate of an international private utility company, which operates the electrical and wastewater collection networks as well as the drinking water distribution in Tangiers, Morocco. In 2007, Amendis launched a social program to increase access to piped water and sanitation. As of the end of 2007, approximately 845 low-income households living in "on-the-grid neighborhoods" of Tangiers (i.e. in principle easily connectable) did not have a household water connection because they could not afford the connection fee. These households had free access to public taps in their neighborhood, however, and they also all had sanitation facilities at home.

The program provided a subsidised interest-free loan to be applied to installing a water connection. The loan was to be repaid in regular installments with the water bill over three to seven years. The subsidy did not cover the cost of installing the connection or the cost of water consumed. To pilot-test the program, a door-to-door awareness campaign was conducted in early 2008 among 434 households, randomly chosen from the 845 that needed a connection. Those households received information about the credit offer as well as help with the administrative procedures needed to apply for the credit. The remaining households (the comparison group) were eligible to apply for a connection on credit if they wanted to, but they received neither individualised information nor procedural assistance until 2009.

RESULTS

Since the participating households already had access to the water grid through free public taps, no improvements in the quality of water consumed by households have been found. Despite significant improvement in water quantity, no change in the incidence of waterborne illnesses was found. Nevertheless, households are willing to pay a substantial amount of money to have a private tap at home. Getting connected generates important time gains, but does not lead to increases in labor market participation, income, or schooling attainment. The spared time seems to be used for leisure and social activities. Because water is often a source of tension between households, home connections appear to improve social integration. Overall, despite the financial cost, households' self-reported happiness improves substantially when they get connected to the water system.

SAMPLE RANDOMISED EVALUATIONS ON **URBAN SERVICES**

2 COMMUNAL SANITATION SOLUTIONS FOR URBAN SLUMS IN ORISSA, INDIA

Can improved toilet facilities, combined with innovative accountability systems for maintenance, increase the use of community toilets in urban India?

Authors: Sharon Barnhardt, Judy Chevalier, Mushfiq Mobarak Partners: Bhubaneswar Municipal Corporation, Cuttack Municipal Corporation, Quicksand Design Studio Location: Bhubaneswar and Cuttack, Orissa Sample: 133 slum neighborhoods Timeline: 2011-2014 Themes: Governance, Health

POLICY ISSUE

In densely populated and rapidly growing countries, severe space constraints, poor utilities infrastructure, and temporary housing construction can render private household sanitation facilities infeasible. Improving communal toilets, which serve entire neighborhoods, may be a more feasible way to improve sanitation, health and well-being in such densely populated areas. However, these kinds of facilities face their own set of problems. Because the benefits of cleaner facilities extend beyond the individual, people may be unwilling to help with repair and maintenance. When the toilets then fall into disrepair, people often revert to open defecation, leading communal toilets to be abandoned. Can innovative systems of facility management help overcome these "collective action" problems and make communal toilets a sustainable option in urban slums?

CONTEXT

In the slums of Bhubaneswar and Cuttack in India, almost 45 percent of households use either public toilets, which are meant for a rotating population in commercial areas, or communal toilets, which serve a fixed residential population. However, the condition of these facilities is very poor. A preliminary survey showed that 53 percent of these toilets were either "dirty" or "very dirty", and one in six facilities was completely non-functional. Households who were dissatisfied with the cleanliness of their community's toilets were more likely to practice open defecation, and almost 30 percent of households reported doing so. Qualitative research suggests that these poor conditions may be caused by weak systems of accountability for toilet maintenance and repair.

DESCRIPTION OF INTERVENTION

This program sought to improve the physical infrastructure of community and public toilets, as well as to improve the associated management systems in order to ensure long-term maintenance. The physical infrastructure of a set of existing community toilets and a smaller set of existing public toilets will be updated to ensure that all have an adequate number of gender-separated toilets and washbasins; sufficient lighting and ventilation; and enough water for all services. A set of new toilets will also be constructed to these standards. A randomly chosen subset of both the community and public toilets will also be given enhanced, infrastructure, such as a space for bathing. Half of the improved community and public toilets, including both those with and without the enhanced infrastructure, will be randomly selected to be maintained by a private firm, while the remainder will be managed by the community according to a "constitution" that specifies responsibilities and rights.

In order to identify a solution that will produce the most attractive, sustainable and hygienic alternatives to open defecation for slum residents, researchers will test a variety of complementary household-level interventions, such as discount coupons for shared facilities and varying the pricing structure (monthly passes vs. pay-per-use). Researchers will



also conduct a program of demand generation activities in a subset of communities around community and public facilities. These activities will be used to help communities notice the problems associated with open defecation and develop community cohesion to sanction it.

Researchers will collect data to measure take-up and maintenance of sanitation facilities over the life of the program. Household surveys will be used to examine satisfaction with the facilities, instances of diarrheal disease, and differential access within the household.

RESULTS

Project ongoing; results forthcoming.

EXECUTIVE SUMMARY OF THE URBAN SERVICES REVIEW PAPER¹

1 BACKGROUND

Access to safe water and sanitation is essential for health, security, livelihoods, and quality of life. Inadequate access to safe water and exposure to pathogens due to the poor treatment of solid waste leads to adverse health consequences, including diarrheal disease. Diarrhoea is responsible for an estimated 21 percent of under-five mortality in developing countries–2.5 million deaths per year, and over 4 percent of the world's disease burden. However, the developing world–particularly Asia and Africa–is lagging in water and sanitation coverage. Nearly 2.4 billion people are expected to remain without access to proper sanitation in 2015.

While the problem of inadequate access to water and sanitation exists in both rural and urban areas, the problem is particularly pressing in cities. With internal migration, cities are where an increasing proportion of the poor live. In the last three decades, growth in urban populations in developing countries exceeded that of rural areas three-fold. In 2007, there were already more people living in cities than in rural areas.

The water, sanitation, and hygiene infrastructure of many cities is stressed beyond capacity, and infrastructure investments have not kept pace with rapid and unplanned urbanisation. While large infrastructure overhaul–if and when it is possible–has great potential benefits, various public finance, planning, budgetary, and institutional impediments limit how much can be achieved in the short run through large-scale investment alone.

In this context, the strategic focus of J-PAL's Urban Services Initiative (USI) will be to design or identify, and rigorously test innovative micro- and medium-scale solutions to the problem of inadequate access to water, sanitation, and hygiene (WSH) for the urban poor in Asia and Africa.

While there is a vast literature addressing the impact of access to improved WSH services on health outcomes, there is surprisingly little rigorous evidence on interventions that effectively and sustainably improve access to WSH services for the urban poor. Given this, the emphasis of the research conducted under USI will be on *how*, rather than *whether*; taking the potential impacts of improved WSH access largely as a given, the question that will be asked is: *How can we achieve better urban services outcomes, access, and coverage*?

¹For the complete list of citations and references, please refer to the full version of the Urban Services Review Paper at http://www.povertyactionlab. org/doc/urban-services-review-paper.

EXECUTIVE SUMMARY OF THE URBAN SERVICES REVIEW PAPER¹

2 BARRIERS PREVENTING IMPROVEMENTS IN WATER, SANITATION AND HYGIENE

To address the problem of achieving greater coverage, a first step is to identify the barriers to innovation and implementation of improved water and sanitation. USI identifies three key barriers:

a. Insufficient supply: Building water and sanitation infrastructure is costly and may involve numerous technical, bureaucratic, and legal constraints-particularly in the developing world. There may be smaller-scale, off-grid, innovative supply solutions, but realizing those solutions requires clever innovations in design of contracts, pricing policies, and market development.

b. Insufficient demand: Even in places where a water and sanitation network exists and it is technically feasible to connect to it, there may be limited demand for those services. Willingness-to-pay may be low, different people's demand may be inter-linked, and the presence of transient or migrant populations creates complications when community-level solutions are required.



c. Institutional constraints: Centralized supply solutions may not be sustainable or even possible if regional and local government, or local non-governmental or community-based organisations are not involved to facilitate implementation. Coordination problems can arise when the sanitation or water infrastructure is shared and must be jointly maintained.

3 FOUR KEY AREAS OF RESEARCH

a. Consumers' willingness to pay

Improving delivery of WSH services will require identifying the barriers to adopting new products, technologies, and solutions. Estimating the underlying factors that affect demand can inform pricing policy, shed light on the role of credit, information gaps, and other determinants of technology adoption.

So far, the evidence on consumers' willingness to pay is mixed. While some studies show surprisingly low willingness to pay for clean water, there is some evidence that the poor are willing to pay for the convenience of in-home piped water, or to switch from using arsenic-contaminated water, or to travel longer distances to access clean water. More research is needed to identify household characteristics that affect willingness to pay.

It is likely that people exhibit low willingness to pay for WSH services because they do not fully understand its value over their current options, or may underestimate the health costs. Programs such as Community-Led Total Sanitation (CLTS) respond to this perceived lack of information. There is some evidence that households respond to information campaigns on benefits of water quality or hand washing, but more research is needed to understand the conditions in which information really makes a difference.

Recent evidence from studies on improved cookstoves, bednets, and in-home water connections shows that even when households understand the health benefits of a new technology, their primary concerns are more about other attributes of the technology such as convenience or comfort. There may thus be value in better understanding of consumer preferences, and "bundling" product amenities in optimal ways to encourage the take up of new WSH technologies.

Another factor affecting consumer demand may be small bureaucratic hurdles related to accessing WSH services. A study in Morocco suggests that households are much more likely to take up a water connection when they are given athome administrative assistance. More evidence is needed to understand if bureaucratic hurdles are indeed a significant barrier.

EXECUTIVE SUMMARY OF THE URBAN SERVICES REVIEW PAPER¹

In cases where willingness to pay is still low, it may be costeffective and economically efficient to subsidize take-up, given the potential negative externality effects of waterborne diseases on the local community. There is inconclusive evidence on whether people who are willing to pay less for a service may also be less likely to use it or if not paying for something makes it less desirable. Devising "smart subsidies" that account for economic efficiency and/or psychological considerations is a promising area of research.

Some WSH products require non-negligible up-front fixed costs for adoption. Studies with bednets and in-home piped water connections have shown that ability to pay may hinge on access to credit or savings. There is room for additional research on these issues, especially in urban settings with very different employment conditions and cash flow situations.

The economics of sanitation and trash management can be very different for business models that rely on revenues from re-use and recycling of waste, as compared to just user charges. There is little evidence on sustainable business models in this realm. More research is needed both on technologies that can more effectively turn waste into something valuable, as well as on innovations in financial, marketing or industrial organization that can better support entrepreneurs in this space.



Finally, willingness to pay may also be affected by disparities between how much the technology is valued by the end user, and how much it is valued by the person in the household in charge of making purchasing decisions. A growing literature indicates that not only preferences, but tolerance to varying price levels may also vary with gender. More research is required to better understand these mechanisms in the context of WSH services, and to determine the combinations of prices and other interventions that would ensure optimal take-up.

KEY OPEN QUESTIONS

-What are the underlying factors that affect demand of WSH services for the urban poor? How can we use these insights to inform and design pricing policies, discounts or subsidies, and marketing techniques?

-What household characteristics affect the willingness to pay for WSH services, especially sanitation services?

-Under what conditions do information campaigns that explain the benefits of improved WSH facilities really make a difference?

-How can we "bundle" products to encourage take-up of new WSH technologies? What bundles best capture consumer's preferences?

-Do bureaucratic hurdles pose a significant barrier to access of WSH services? If so, what exactly is the source of the problem: is the problem real? Or is it only a perception? Do these costs, perceived or real, lead households to procrastinate?

-Can "smart subsidies" that account for economic efficiency (including negative effects on others) and/or psychological considerations encourage better take up?

-Do subsidized services that have proven to be effective in rural areas (e.g. free, point-of-collection chlorine dispenser systems combined with a local promoter) work in urban areas too?

-Does access to credit or savings affect take-up of WSH products with non-negligible up-front fixed costs? How does this relationship vary for urban settings with different employment conditions and cash flow situations?

-Are there better technologies to convert trash or solid waste into something valuable that can subsidize the cost of waste management services for consumers? How can we support entrepreneurs to mobilize these technologies, and create sustainable business ventures?

-What are the linkages between prices of WSH products, different implicit costs for household members, intrahousehold resource allocation, and preferences for take up? What combination of prices and other interventions would increase take up?

EXECUTIVE SUMMARY OF THE URBAN SERVICES REVIEW PAPER¹

b. Coordination failure and collective action problems

Due to strong linkages between different households' decisions, coordination failures pose a serious challenge to implementing community-level solutions such as community sanitation centers, garbage collection or even regular maintenance of drainage. Even when new solutions are implemented, they may not be sustained if no one takes responsibility for maintenance tasks. While there is evidence that community sanitation facilities are usually poorly maintained, very little is known about the specific obstacles to collective action, and how to solve them.

Some interventions, like Community Led Total Sanitation (CLTS), adopt a "big push" approach encompassing the entire community. This gets around the problem of individual households not having an incentive to adopt a WSH solution. But these interventions have so far mostly been confined to rural areas. There is a wide literature on the subject of technology diffusion through social networks, yet there is not enough evidence on the most effective ways to use social networks for the purpose of diffusing new innovations.

What characteristics about a group make them less likely to coordinate? There is some empirical research on the effect of group size, for example; specifically, if large groups are more prone to coordination problems than smaller groups. However, the evidence has been mixed. Another important group characteristic is within-group diversity. New urban areas may be very heterogeneous-both ethnically and in terms of wealth distribution. They may face a constant influx of new migrants. There is some evidence that increased heterogeneity leads to less cooperation, but it would be useful to know what types of heterogeneity are most relevant.

Solutions to coordination problems require that institutions be designed to incentivize cooperative behavior within that group. While some empirical studies have tried identifying institutional characteristics that are successful in solving coordination failures, by and large, rigorous research in this area is sparse. The "industrial organization" of facilities is a promising area of research, and could cover topics such as optimizing management systems (private versus community managed), pricing schemes, and rules for access.

Finally, if governments opt for the private management of urban services, there is little evidence to guide them. For example, should procurement contracts be auctioned, and if so, through what type of auction? Research is also needed to determine how governments can enhance competition in public procurement auctions in the WSH sector, and whether competition is sufficient for efficiency.



KEY OPEN QUESTIONS

-What are the specific obstacles to collective action on community-level solutions to WSH services in urban areas? How best can we counter these problems?

- What are the most effective ways to diffuse WSH innovations through social networks?

-How does group size affect a community's ability to work together?

-Do different kinds of within-group diversity affect coordination differently? Do they lead to different outcomes in pubic goods provision?

-What characteristics and features of institutions can help or hinder group coordination problems?

-What are the optimal mechanisms through which governments can efficiently procure WSH services from the private sector? Should procurement contracts be auctioned, and if so, through what type of auction? How can we enhance competition during procurement?

EXECUTIVE SUMMARY OF THE URBAN SERVICES REVIEW PAPER¹

c. Institutional and legal issues

Adoption of a new technology for water and sanitation sometimes involves large investments that require local institutional and legal arrangements. Slum dwellers often live in houses with insecure property rights. This could weaken their incentive to make long-term capital investments or to use their property as collateral to secure loans for capital investments. More research is needed the effects of land titling on WSH investments, and optimal ways to provide property rights.

A related issue is that individual recipients of land rights in slums may sell their land rights to more affluent city residents, exacerbating the growth of slums. Policymakers are investigating alternate tenure forms and there are some innovations (such as the Community Land Trust model in Kenya) emerging, but rigorous evidence on their impact is missing.

The sharing of information on service quality is another institutional factor that could encourage providers to improve quality. Current evidence on such programs is mixed, and often depends on the dimensions that the service providers are required to report on. More careful design and research of such programs is needed.

KEY OPEN QUESTIONS

-What are the effects of providing secure property rights (e.g. land titling) to slum dwellers on WSH investments?

-Are there any alternative tenure arrangements that are effective in providing secure property rights to slum dwellers while preventing them from selling these rights off in the market?

-When and how does sharing information about service quality induce service providers to improve that quality?



d. Political economy and public finance issues

For larger scale solutions to WSH challenges, local or central government participation is key. This is where issues related to accountability of elected representatives to the urban poor–who often form a sizable voting bloc–and public finance become relevant.

Voters may not be well-informed about the responsibilities of their representatives or those representatives' performance in office. Evidence shows that voter mobilization and information campaigns can potentially solve this problem, but little is known on how politicians respond in return. Further, there is some evidence from rural India showing that rules that affect the identity of elected representatives (e.g. quotas) also affect what they choose to invest in. There is no corresponding evidence for urban areas.

Building centralized water and sanitation infrastructure is costly, further complicated by the complementary nature of water and sanitation provision: many of the safest sanitation improvements require adequate water supply. How to mobilize public resources (through revenue generation, taxation, innovations in pricing, cross-subsidization, and so forth) to overcome the public finance challenges may be a fruitful area of inquiry for USI-funded projects.



KEY OPEN QUESTIONS

-What are the mechanisms of vote buying and its implications for the quality of publicly-provided WSH services?

-How can urban voters in poor neighborhoods be effectively mobilized to demand accountability of their representatives, and how do the representatives respond in return?

-Do rules that affect the identity of elected representatives (e.g. quotas) in poor urban areas also affect what they choose to invest in?

-How can government programs, budgets, and taxation systems be adapted to overcome public finance challenges and enable better provision of WSH services?

BIOS: PARTICIPATING IMPLEMENTING PARTNERS

AgriProtein

LOCATION:

Cape Town, South Africa

FOUNDED IN: 2009

WEBSITE: www.agriprotein.com

Industrial farming of chickens, pigs and fish relies on protein from two sources: land-based soya plantations and marine fishmeal. Agricultural protein requires vast amounts of land and water, while the sea-caught alternative has material consequences for marine life. Increases in global food demand and environmental issues have caused prices of both protein sources to soar in recent years. AgriProtein is leading a new industry—called nutrient recycling—in using organic waste to create protein and other byproducts such as soil conditioners and even biodiesel. This protein will supply the increasing demand for animal feed, as current sources are limited. Using fly larvae fed on abundant waste nutrient sources, AgriProtein has developed and tested a new large-scale and sustainable source of protein. The bioconversion process takes 'free' waste materials and generates a valuable commodity.

CONFERENCE REPRESENTATIVES:

David Drew, **Managing Director** David Drew is an international marketer, technologist and entrepreneur with a blue-chip background. At 26, he ran the European operations of WordXChange before it was acquired by AT&T. With MCI WorldCom he was UK Marketing Director before heading their European and Asian mergers and acquisitions. In 2003, he cofounded the Dialogue Group, Africa's first international outsourcer and grew it to over three thousand employees before listing on the Johannesburg Stock Exchange in 2007. Today, he runs AgriProtein, which is developing sustainable solutions to the world's protein supply issues. David is passionate about everything high tech, and received the Financial Times technology prize for innovation in 2000. David is a graduate of the European Business School.

Cobus Kotze, BioCycle Venture Leader Cobus Kotze has a diverse business background that includes five years as an officer in the South African Navy followed by four years as a contributor and later editor of the internationally acclaimed African Mining and African Energy Journal magazines. In 2010, he started a venture called FiyaGesi to supply bottled biogas as a clean cooking fuel to poor communities in South Africa. Currently, Cobus is running The Bill & Melinda Gates Foundation-funded BioCycle Project for AgriProtein. The BioCycle Project aims to commercialise the bioconversion of faecal waste into insect protein using Black Soldier Fly Larvae. Cobus holds a BPhil in Sustainable Development Planning and Management from the University of Stellenbosch.

Development Workshop Angola

LOCATION: Luanda, Angola

FOUNDED IN: 1981

WEBSITE: www.dw.angonet.org

Development Workshop (DW) Angola is a national partner of a wider international DW network, a nonprofit organisation working for social justice by building the capacity of communities and institutions to resolve problems and creating development opportunities while building post-conflict peace and reconciliation. Founded internationally in 1973 and in Angola in 1981, DW has worked with communities, grassroots organisations, non-governmental organisations (NGOs), local and national government authorities and international organisations. DW has accumulated decades of professional expertise and practice in the human settlements fields of water and sanitation, urbanism, municipal governance, microfinance, social enterprise and land tenure rights. DW Angola engages in ongoing advocacy with government policymakers and other Angolan civil society actors on the rights to equitable access to basic services using emerging civil society spaces and social media.

CONFERENCE REPRESENTATIVES:

Allan Cain, Director Allan Cain is an architect and a specialist in project planning, microfinance and urban development. He has over 35 years of professional experience in developing countries, thirty of those in conflict and post-conflict Angola. He has worked as a consultant and led research projects for the World Bank, UN Habitat and other international organisations. He is a member of the boards of several development institutions. His articles and papers have been published widely in international journals. He is cofounder and president of KixiCrédito, Angola's first non-bank microfinance institution and has pioneered housing microfinance in Angola. Allan completed his graduate studies at the Architectural Association (London, UK), and further specialist studies at Harvard University and Boulder, Colorado (in Microfinance and Housing Finance).

André Melo, Head of Research and Policy André Melo is an integrated researcher and policy analyst focusing on migration, health and urban development policy. He has fourteen years of experience working on migrant settlement and livelihood issues in Zambia, Angola and the USA. He has participated in various academic and professional research projects at various institutions including Universities in Zambia, Germany, the US and Angola. He is a member of the Angolan State Alumni Association, the Utah Council for Citizen Diplomacy (UCCD) and the US National Society for Leadership and Success (NSLS). He holds a master's degree in public health policy from the University of Utah, where he was a Foreign Student Fulbright Scholar.

eThekwini Water and Sanitation

LOCATION: Durban, South Africa

WEBSITE:

www.durban.gov.za/ City_Services/ water_sanitation eThekwini Water and Sanitation is a unit of the eThekwini municipality and is responsible for the provision of water and sanitation services to all customers in the municipality. The unit has received several awards for new and innovative ways of providing services through initiatives such as free basic water, flow limiters, the use of plastic bodied water meters, polypropylene water piping, ground tanks and semi-pressure water service levels, urine diversion toilets, anaerobic baffled reactors, the use of grey water for urban agriculture, customer service agents, condominial sewerage and a customer water debt repayment policy, many of which were the first introduced in South Africa. In addition, the unit has an MOU with local tertiary institutions, such as the Pollution Research Group at University of KwaZulu-Natal, to strengthen collaboration on research and development, capacity building and knowledge management. The desired outcomes included a stronger economy, an improvement in the quality of life for all citizens and the development of a higher skills and technology base.

CONFERENCE REPRESENTATIVES:

Teddy Gounden, **Senior Manager** Mr. Teddy Gounden has over 25 years of work experience within the water and sanitation sector. Key components of his work have been capacity building, education and research. He has participated in various research and capacity building programmes at the local and international level and currently serves on an advisory committee for environmental education in Durban. Mr. Gounden holds a Higher Education Diploma and a Bachelor of Commerce Degree from the University of South Africa.Scholar. Global Communities (formerly CHF International)

LOCATION:

Headquarters at Maryland, USA; Operations globally, including seven countries in Africa

FOUNDED IN: 1952

WEBSITE: www.chfinternational.org Global Communities is an international nonprofit organisation that works closely with communities worldwide to bring about sustainable changes that improve the lives and livelihoods of the vulnerable. They make a difference by engaging with communities, governments, the private sector and NGOs as partners for good—bringing together complementary strengths and shared responsibilities to work toward common goals. Global Communities began in 1952 as the Foundation for Cooperative Housing, and until recently, was known as CHF International. Global Communities currently works in more than twenty countries around the world, including seven in Africa—DR Congo, Ethiopia, Ghana, Kenya, Liberia, Rwanda and South Sudan. Their mission is to be a catalyst for long-lasting positive change in low- and moderate-income communities around the world, helping them improve their social, economic and environmental conditions.

CONFERENCE REPRESENTATIVES:

Karen Anderson, Country Manager–Liberia Karen Anderson has been working in Liberia for nearly two years, and has over five years of international experience, including extensive field work in resource-scarce and post-conflict environments within rural communities, international NGOs and UN agencies. From 2011–2012, she managed programme implementation for a study by Innovations for Poverty Action (IPA) on vulnerable youth in urban settings (STYL). She also manages a program working to improve the sustainability of the solid waste management sector in Monrovia (YES). Prior to her work in Liberia, she earned an MA in International Development from Johns Hopkins School of Advanced International Studies.

Scott Yetter, Director of the Office of Knowledge Management and Evaluation, Global Communities Scott Yetter is an international development professional with demonstrated success in the design and implementation of programmes involving the training and capacity building of local organisations and institutions and value chain development. In his current position at Global Communities, Scott oversees activities aimed at increasing knowledge sharing and institutionalising Global Communities' participatory methodology, organisational capacity building methodology and monitoring and evaluation practices. He was the creative developer of Global Communities' Participatory Action for Community Enhancement (PACE) manual and an accompanying workshop series, and leads training-of-trainers to institutionalise the PACE methodology across Global Communities. Scott co-developed the learning agenda for The Bill & Melinda Gates Foundation-funded SCALE-UP programme, which focused on building the capacity of intermediary organisations and local governments to upgrade urban slums in Ghana and India.

Alberto Wilde, Country Director–Ghana Alberto Wilde provides overall programme direction, strategic vision and leadership for Global Communities in Ghana. Alberto is a business administrator by profession; he has more than eighteen years of experience in business administration, project management, finance and human resources. He joined CHF in 2003, and has utilised his extensive knowledge of financial rules, regulations and management to implement a series of complex and multidimensional infrastructure construction projects. Prior to arriving in Ghana in 2011, Alberto was CHF's Country Director in Haiti and managed US\$144 million in programmes. He was responsible for successful implementation and achievement of over 250 projects across Haiti, benefiting more than 250,000 people. These projects included construction of roads, bridges, canals and schools, reforestation, soil conservation, water and sanitation systems and workforce development. Alberto holds a master's degree from the Catholic University of Bolivia.

George Yanore, Programme Director-Ghana George Yanore is a civil engineer with over 25 years of experience in water and sanitation programming and implementation in Ghana. He is currently the Programme Director for WASH-UP, where he is responsible for the field coordination and facilitation of extension activities, managing programme staff and contractors as well as reporting on the program. Prior to his engagement with CHF, George served in various capacities with several development organisations including the Canadian International Development Agency (CIDA), UNDP/World Bank and UNICEF water and sanitation in Ghana. At UNDP/World Bank, George was a Project Team Leader for a Community Management Demonstration project from 1988 to 1990. Due to the success of his pilot project, the concept of community ownership and management of water and sanitation facilities gained popularity and evolved into the establishment of the Ghana National Community Water and Sanitation Agency. George holds an MSc in Water and Environmental Engineering from Loughborough University in Britain.

Muungano Support Trust (MuST)

LOCATION: Nairobi, Kenya

FOUNDED IN: 2010

WEBSITE:

muunganosupporttrust. wordpress.com/ Muungano Support Trust (MuST) serves as Secretariat to the Federation of Slum Dwellers in Kenya, popularly known as Muungano wa Wanavijiji. The Secretariat innovates for social transformation through competitive organising of informal settlements, which involves inventory and settlement profiling, mapping and enumeration, community planning that enables communities to take charge of their aspirations concerning their settlements, and project innovation. As a body within the Federation, the Secretariat prides itself as a "House of Innovations" where the successfully innovated products and projects are subsequently scaled up in select areas. The Secretariat's implementation collaborators are local governments in the counties, local universities and international universities in urban planning like the University of California, Berkeley, local ministries and the UN. MuST's projects are mainly funded by Slum Dwellers International, Ford Foundation and Rockefeller.

CONFERENCE REPRESENTATIVES:

David Mathenge, Coordinator Community Planning David Mathenge has served as the technical manager for several high-level slum improvement projects in Kenya undertaken by MuST, such as Resettlement Advisory Services to the Government of Kenya and the Mathare Zonal Plan, amongst others. A rich technical background in surveying, GIS and urban planning has enabled him to undertake many sociotechnical projects in slum communities across Africa. David's areas of expertise include community mobilisation and organising, spatial and social economic data collection, and management of community-led slum improvements.

Moses Mwangi, **Muungano Federation Leader** Moses Mwangi, the National Secretary of the Federation of Slum Dwellers in Kenya, is a slum resident and a national leader. For all the accomplishments in land regularisation, shelter and policy formulation, Mwangi has worked closely with various government projects, donor agencies and academia to assist in building strong relationships between the programmes and the residents of the target settlements. Development happens when communities own and drive their own processes. He has been instrumental in assisting communities in building consensus on strategy, budgeting, role formulation, planning and actual implementation. As the Coordinator of the 12,000 Federation members from Kenya's fourth-largest urban town (Nakuru Town), Mwangi has provided leadership and community organising skills to various citywide initiatives.

Sanergy

LOCATION: Nairobi, Kenya

FOUNDED IN: 2011

WEBSITE: http://saner.gy/ Sanergy aims to provide accessible, affordable and hygienic sanitation in urban slums for everyone. Sanergy believes that solving the sanitation crisis requires more than just building toilets, and takes an innovative systems-based approach to build out the entire sanitation value chain. Their framework of a sustainable sanitation cycle features three major parts: (1) Franchise–Throughout the slums, they build a dense network of small-scale, high-quality sanitation centers close to homes. They franchise each Fresh Life toilet to local operators and provide ongoing operational support. (2) Collect–The waste from toilets is collected into sealed 30-liter cartridges. Sanergy's waste collection team collects the cartridges from the operators and provides clean, empty ones daily. The waste is removed from the community and brought to their central processing facility. (3) Convert–Sanergy converts the waste into saleable products, such as organic fertilizer and energy. At each of the above steps, Sanergy creates jobs and opportunity, while simultaneously addressing serious social and economic needs.

CONFERENCE REPRESENTATIVES:

David Auerbach, Co-founder David Auerbach is a cofounder of Sanergy and is responsible for building partnerships. Previously, David ran partnerships, policy and outreach at Endeavor, a nonprofit that helps high-impact entrepreneurs in the developing world. He was the Deputy Chair for Poverty Alleviation at the Clinton Global Initiative from 2005–2006, and taught in China for two years. David is a Legatum Fellow for Development Entrepreneurship at MIT, an Echoing Green Fellow and a Rainer Arnhold Fellow. He holds an MBA from MIT and a BA from Yale University.

Dennis Ochieng, Operations Manager Dennis Ochieng oversees Sanergy's field operations work, measures impact and ensures that the results are applied to Sanergy's larger operations. Dennis has over ten years of work experience. He started as a lecturer at Great Lakes University in Kisumu before moving to South Sudan where he worked at Marie Stopes International. He served as an adviser and established monitoring and evaluation systems to measure impact of Primary Health Care programmes in two states. He holds a BA in Education and an MS in Public Health from Moi University, Eldoret.

SeeSaw

LOCATION: Cape Town, South Africa

FOUNDED IN: 2011

WEBSITE:

www.greenseesaw.com

SeeSaw focuses on how technology can strengthen water and sanitation provision and protect the environment. SeeSaw believes that while technology is not a 'silver bullet', when applied right, it can strengthen the providers that deliver services and help those supporting the sector at other levels. They advise utilities, NGOs, governments and donors on how to collect data, generate information and use this information intelligently to improve results. SeeSaw also provides software that captures data and photos with GPS coordinates via affordable cellphones. This records the location and status of WASH customers, assets and facilities, among other things. SeeSaw also specialises in cost-effective systems that get direct feedback from beneficiaries about the services they receive and the issues they see.

CONFERENCE REPRESENTATIVES:

David Schaub-Jones, Managing Director For over a decade, David has worked on supporting innovative utility partnerships for water and sanitation delivery, primarily in Africa. Much of this work has focused on how these partnerships can include poor communities. He has a long experience of working in urban sanitation, particularly around the business models of sanitation marketing, pit emptying and waste treatment. He has previously worked for both donors and the NGO community. Prior to immigrating to South Africa, David was an independent consultant working on water and poverty issues with, among others, the World Bank, the Water and Sanitation Programme and the UK consultancy Atkins. David has a background in engineering and economics, with degrees from Johns Hopkins University, the Ecole Nationale du Génie de l'Eau et de l'Environnement de Strasbourg and Southampton University. He has been a United Nations Associate and Queen's Jubilee Scholar.

Senegal National Sanitation Utility (ONAS)

LOCATION: Dakar, Senegal

FOUNDED IN: 1995

WEBSITE: www.onas.sn The Senegal National Sanitation Utility or L'Office National de l'Assainissement du Sénégal (ONAS) is a public industrial and commercial organisation for the management of the urban sanitation sector. It was established in June 1995 as part of Senegal's first reform of the sanitation sector. ONAS's mission is to oversee and provide project management expertise for the implementation and maintenance of public sanitation services. It is also responsible for the development and promotion of sanitation facilities at the household level. The long-term objective of ONAS is to achieve financial equilibrium in the sanitation sector. In order to help achieve this objective, ONAS aims to delegate a significant number of its operating tasks to the private sector.

CONFERENCE REPRESENTATIVES:

Dr. Mbaye Mbéguéré, Programme Coordinator Dr. Mbaye Mbéguéré joined ONAS in January 2012, and is the National Coordinator of the programme for the structuring of the faecal sludge market for the benefit of poor households in Dakar, funded by The Bill & Melinda Gates Foundation. Prior to that, from December 2006 to December 2011, he was appointed project manager at the Department of Water and Sanitation in Developing Countries (Sandec) of the Swiss Federal Institute for Aquatic Science and Technology (Eawag) where he coordinated research activities on faecal sludge in Senegal and Burkina Faso. As a biologist, he specialises in water and sanitation. His research received the Grand Prix du Président de la République du Sénégal pour les Sciences award in 1999. In addition, Dr. Mbéguéré conducts several educational activities around the world (Dakar University, University of Nouakchott, UNITAR, AgroParisTech, etc.). He holds a PhD in Environmental Sciences.

Waste Management Department, Kumasi Metropolitan Assembly

LOCATION: Kumasi, Ghana

WEBSITE:

www.kma.gov.gh/ kumasi-metro/page/ 5122/waste-management The Waste Management Department of the Kumasi Metropolitan Assembly is responsible for the hardware aspects of environmental sanitation. The mission of the department is to keep the city clean and healthy by the provision and delivery of effective and efficient waste collection services and programmes, and environmentally acceptable disposal thereby creating an enabling environment for healthy living.

The department is strongly committed to providing customers with value-for-money services through public-private partnership; providing quality public sanitation facilities that ensure effective human excreta management, and using innovative strategies to continually provide effective and efficient services.

CONFERENCE REPRESENTATIVES:

John Yaw Donkor, Public Health Officer For the past fifteen years, John Yaw Donkor has worked as public health officer in Kumasi bringing to bear his experience in the field of public health, sanitation, health education, hygiene promotion and mobilisation of local resources for development. John has been actively involved in special projects including disease control for endemic diseases such as malaria, cholera and typhoid; hygiene education development; and implementation of sustainable financing in waste management. He is also the focal person for the Public Health Component of World Bank/AFD-funded projects in Kumasi and a Team Leader for the management of field data gathering for the preparation of District-Based Sanitation Strategy and Action Plan (DESSAP) for input into National Environmental Sanitation Action Plan and Investment Plan (NESSAP) and other private sector led projects. John holds an MSc from Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana.

WaterHealth International

LOCATION: California, USA

FOUNDED IN: 2005

WEBSITE: www.waterhealth.com

WaterHealth International (WHI) is a global leader in providing access to safe, high-quality, affordable drinking water to underserved communities. WHI has developed a low-cost business model for the operation, maintenance and quality monitoring of community water purification systems (WaterHealth Centers, or WHCs). WHI has installed more than 500 WHCs across five countries, providing access to safe drinking water for more than 5 million people. They provide ongoing operations, maintenance and quality monitoring for their systems thereby ensuring long-lasting, reliable access to safe, high-quality water. The WHCs produce water that meets WHO quality standards unlike water from many bore wells and other sources, which are often unsafe or become unsafe over time. Their decentralised purification systems are also cheaper to build and operate than large, centralised treatment and pipe systems.

CONFERENCE REPRESENTATIVES:

Sameer Mithal, **Chief Development Officer** Sameer joined WHI in 2009 to lead global business development. In this role he is responsible for identifying new geographic areas of growth as well as appropriate business partners who can facilitate the company's strategic objectives. Prior to joining WHI, he was a Senior Principal with IBB Consulting Group and focused on strategy, new product definition and business development opportunities for companies in the cable, media and communications industries. Sameer was also the founder and managing partner of a technology development company and VP of Business Development/Operations for a media-focused startup. In addition, Sameer has worked for several years with Booz Allen Hamilton on projects in Asia, Latin America and Europe. Sameer holds an MBA in Finance and Strategy from The Wharton School and a Master of Science in Computer and Systems Engineering from Rensselaer Polytechnic Institute.

Water and Sanitation for Africa (WSA)

LOCATION: Ouagadougou, Burkina Faso

FOUNDED IN: 1988

WEBSITE: www.wsafrica.org Water and Sanitation for Africa (WSA) is a pan-African intergovernmental organisation with a mission to provide continental leadership in the development of innovative and sustainable approaches, evidence-based policy advice and advocacy services in the provision of water, sanitation and hygiene services in Africa. With headquarters in Burkina Faso, WSA is currently present in 22 African countries in West, Central and Eastern Africa. WSA's mandate is to support member countries in developing and implementing their respective national agendas for sanitation, hygiene and water management through partnerships with the private sector, civil society and local governments, and to build and strengthen critical capacities for the development of sustainable programmes in the WASH sector. WSA's demand driven approach to service delivery is centered on research, capacity building, advocacy and policy influence to benefit poor and marginalised communities by ensuring equitable and accelerated access to sustainable safe water and sanitation.

CONFERENCE REPRESENTATIVES:

Mathew Ocholi, Director, Programme Support and Development Mathew Ocholi is a WASH practitioner with expertise in research, project evaluation, programme design and implementation. In his current role, Mathew coordinates research projects on sustainable water delivery in Ghana, a faecal sludge management research project in Dakar, economic and financial models research in two African countries and a demand-led sanitation study in eight countries. Previously, he led the WASH component of the DFID-funded Integrated Growth and Development Programme (IGDP) in Nigeria between 2004–2007, scaling up WaterAid's successful practices in the WASH sector. He also led the introduction of Community Led Total Sanitation (CLTS) programme in Nigeria in 2006. He holds an MSc in Water and Waste Engineering from Water, Engineering and Development Centre (WEDC) at Loughborough University (UK).

Jean Birane Gning, Business Analyst Jean Birane Gning is an economist-environmentalist specialising in WASH. His academic and professional experiences span socioeconomics, the environment, business management, natural resources management, environmental economics, urban management and evaluation. In the last six years, he was a researcher with Environmental Sciences Institute of Senegal and the Swiss Federal Institute of Water Research (Sandec/Eawag), focusing on sanitation and Faecal Sludge Management (FSM). Jean's key areas of research are socioeconomic and financial viability of sanitation companies in Senegal. He has helped to improve emptying companies and FSM businesses in Dakar, and has consulted many FSM organisations in Senegal and beyond. He is currently pursuing his PhD thesis on sanitation pricing in sub-Saharan Africa.

The Water and Sanitation Program (WSP), Mozambique

LOCATION: Maputo, Mozambique

WEBSITE: www.wsp.org

WSP is a multi-donor partnership administered by the World Bank to support poor people in obtaining affordable, safe and sustainable access to water and sanitation services. WSP works directly with client governments at the local and national level in 25 countries through regional offices in Africa, East and South Asia, Latin America and the Caribbean, and Washington DC. WSP has led or supported many of the advances made within the water and sanitation sector over the last three decades. It shares best practices across regions and places a strong focus on capacity building by forming partnerships with academia, civil society organisations, donors, governments, media, private sector, and others. In Mozambique, WSP support to the water sector is focused in the water sector information and monitoring system, water supply to rural areas and small towns, and water and sanitation for the urban poor.

CONFERENCE REPRESENTATIVES:

Luis Macário, Water and Sanitation Specialist Luis Macário has more than fifteen years professional experience as a practitioner in the areas of water supply and sanitation, water resources management and capacity building of central and local governments and users. Luis has worked for WSP since 2005, where he has been serving in different capacities as a consultant and then as staff at WSP Mozambique. Specifically, he has been involved in the research and development of water supply and sanitation strategies, such as the Rural Water and Sanitation Strategic Plan (2006–2015), Urban Water and Sanitation Strategic Plan (2009–2025) and Urban Water and Sanitation Strategy (2010–2025). He is currently involved in formative research in rural water supply, rolling out the sector information system and implementing the small towns delegated management framework, among other projects.

Water and Sanitation for the Urban Poor (WSUP)

LOCATION: London, UK

FOUNDED IN: 2005

WEBSITE: www.wsup.com

WSUP is a nonprofit partnership between the private sector, NGOs and research institutions focused on solving the global problem of inadequate water and sanitation in low-income urban communities. It brings lasting solutions to low-income areas by working in partnership with service providers including water utilities, local authorities and businesses and the communities they serve. WSUP strengthens the capacity of service providers to deliver sustainable citywide water and sanitation services, promote good hygiene and raise the environmental standards of low-income communities.

CONFERENCE REPRESENTATIVES:

Guy Norman, Monitoring & Evaluation Manager Guy Norman coordinates programme monitoring and evaluation in WSUP's six focus countries. He also leads WSUP's research programme and technical publications series. His particular interests are in the development of improved monitoring systems for urban WASH, impact evaluation of slum sanitation and drainage interventions, and mechanisms for raising city-level public revenue streams to support and enable community- and market-led slum sanitation solutions. Guy holds a PhD from the University of Surrey (UK), where his research looked at the appropriateness of waterborne sewerage for African cities.

Richard Wilson, Programme Director and Technical Advisor Richard is a civil engineer with over 40 years of experience managing a wide range of civil, water and environmental engineering projects in the UK, Eastern Europe, Africa and South Asia. He has worked with WSUP since 2008 as Programme Director and Technical Advisor with primary responsibility for the direction and implementation of specific WSUP-supported projects in Zambia and Kenya. With previous experience in guiding institutional reform and financial and environmental sustainability, Guy is leading capacity-building projects in direct support of water service providers. He is also developing innovative and sustainable institutional and infrastructural programmes with local communities, service providers and asset owners to accelerate provision of affordable and appropriate water and sanitation to serve low-income communities.

Lisa Hawkes, Unilever Project Leader Lisa leads the Clean Team project for Unilever and will be overseeing its growth. Lisa has experience developing business models in emerging markets through her previous role in social business innovation, where she improved branding and distribution of cleaner cooking stoves to increase access and desirability. She recently completed the Unilever Future Leaders Programme in Research and Development.



BIOS: PARTICIPATING USI RESEARCHERS



Thomas Clasen, an epidemiologist, is a Senior Lecturer in Water, Sanitation and Health at the Department of Disease Control, London School of Hygiene & Tropical Medicine. His research focuses

on drinking water quality and sanitation in low-income populations. His current research includes a randomised evaluation of chlorine tablets in India, a field trial in Zambia to assess the impact of water quality interventions among people living with HIV/AIDS, an evaluation of household water treatment options in rural Tanzania, a multi-country evaluation of the MICS surveys on household water treatment, and a health impact evaluation of a large-scale deployment of water filters in Rwanda financed by carbon credits. Thomas holds a PhD in Public Health from the University of London.

Bruno Crépon is a researcher at Centre de Recherche en Économie et Statistique (CREST), and an Associate Professor at ENSAE and École Polytechnique. The focus of his research is on policy evaluation with special attention to labour



market policies. Besides J-PAL, Bruno is affiliated with the Center for Economic and Policy Research (CEPR), and the Institut for the Study of Labor (IZA). He holds a PhD in Economics from the Université de Paris, Sorbonne.



Esther Duflo is the Abdul Latif Jameel Professor of Poverty Alleviation and Development Economics in the Department of Economics at MIT, a founding director of J-PAL, and USI Cochair. She is an NBER Research Associate, and

serves on the board of the Bureau for Research and Economic Analysis of Development (BREAD). Her research focuses on microeconomic issues in developing countries, including household behaviour, education, access to finance, health and policy evaluation. Esther has received numerous academic honors and prizes including the David N. Kershaw Award (2011), the CNRS Médaille de L'Innovation (2011), John Bates Clark Medal (2010), a MacArthur Fellowship (2009), the inaugural Calvó-Armengol International Prize (2009), the "Best French Young Economist Prize" (Le Monde/Cercle des économistes, 2005) and the American Economic Association's Elaine Bennett Prize for Research (2003). Esther holds a PhD in Economics from MIT.



Sebastian Galiani is a Professor of Economics at Maryland University, and USI Co-chair. He works in the areas of Development Economics and Applied Microeconomics. He has

published papers in the Journal of Political Economy, Quarterly Journal of Economics, American Economic Journal, Review of Economics and Statistics, Journal of Public Economics, Journal of Development Economics, Economic Development and Cultural Change, Regional Science and Urban Economics and Labour Economics, among others. His work has been featured in Science, The Economist, The Wall Street Journal, The Times and various other newspapers around the world. Sebastian obtained his PhD in Economics from Oxford University.



Kelsey Jack is an Assistant Professor in the Department of Economics at Tufts University, and a Faculty Research Fellow at the NBER. Kelsey's research explores

incentive-based approaches to encourage the private provision of public goods with a focus on the environment. She combines environmental economics, contract theory, development economics and behavioural economics to examine individual decision making in settings where decisions create social externalities. Her research uses field experiments to test economic theory in developing countries including Malawi, Zambia, Bolivia and Indonesia. Kelsey holds a PhD in Public Policy from Harvard University.



Molly Lipscomb is an Assistant Professor of Public Policy and Economics at University of Virginia. Her research focuses primarily on environmental issues in developing countries and adaptation to lack of health and sanitation services. Molly is a principal

investigator on several large randomised evaluations including a project measuring the impact of different social network interventions in increasing willingness to pay for improved sanitation services in Senegal, and a project testing the relative effectiveness of different types of leaders in increasing the willingness to pay for water treatment tablets in Uganda. Molly holds a PhD in Economics from the University of Colorado at Boulder.



Seema Jayachandran is an Associate Professor in the Department of Economics at Northwestern University, and a Co-chair of J-PAL's Health programme. Much of her work

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behaviors that are likely to be welfare improving, and (2) using field experiments and other methods to study the management of water resources and other infrastructure. He has ongoing experiments in Bangladesh, India, Malawi and Uganda on migration, sanitation, rainfall insurance and environmental technologies (stoves, rainwater harvesting and conservation agriculture). Mushfiq leads the Bangladesh research programme for the DFID/LSE International Growth Centre. He holds a PhD in Economics from University of Maryland at College Park.conservation agriculture). Mushfiq leads the Bangladesh research programme for the DFID/LSE International Growth Centre. He holds a PhD in Economics from University of Maryland at College Park.conservation agriculture). Mushfiq leads



Clair Null is an Assistant Professor at the Rollins School of Public Health, Emory University. Her research interests

include community-based research, global health, health economics, rural health, safe water and statistical modeling. Her current research portfolio is composed of a number of projects related to water, sanitation and hygiene in sub-Saharan African (specifically, rural western Kenya and urban Ghana). Clair holds a PhD from University of California, Berkeley.



Roland Rathelot is a researcher at the Centre de Recherche en Économie et Statistique (CREST) and a Deputy Director at Institut des Politiques Publiques (IPP), Paris, France. His areas of interest include

labour economics, public economics and economics of immigration, with a particular focus on the spatial dimension. He is currently conducting randomised evaluations of counseling programmes dedicated to the youth in France. Roland holds a PhD in Economics from the Paris School of Economics.



William Pariente is an Assistant Professor at Université Catholique de Louvain. His current research focuses on access to credit, poverty and health issues. He is currently working on

several randomised evaluations in Morocco, Pakistan and France. William holds a PhD from the Université de Paris, Sorbonne, where he wrote his dissertation on the analysis of credit demand and the evaluation of policies improving access to credit in three countries: Serbia, Brazil and Morocco.



BIOS: PARTICIPATING LOCAL RESEARCHERS



Cally Ardington is an Associate Professor in the Southern Africa Labour and Development Research Unit (SALDRU) at the University of Cape Town (UCT). She has previously worked

as a Lecturer in the Department of Statistical Sciences at UCT, a Structured Debt and Equity Solutions Specialist at African Harvest Capital and a Market Risk Analyst at NatWest Markets, London. She has extensive experience in the design, management and micro-econometric analysis of social surveys. She has published work on racial inequities in education, orphanhood and schooling, pensions and labour supply, access to financial services and technical aspects of the analysis of survey data. Cally holds a PhD in Economics from UCT.



Murray Leibbrandt is a Professor in the School of Economics at UCT and the Director of SALDRU. He holds the DSD/NRF National Research Chair of Poverty and Inequality Research and is an IZA Research Fellow. His research focusses on South

African poverty, inequality and labour market dynamics using survey data and, in particular, panel data. He is currently one of the Principal Investigators on the National Income Dynamics Study. He is a past president of the African Econometric Society and immediate past president of the Economic Society of South Africa. Murray holds a PhD from the University of Notre Dame in the US.



Carlos da Maia is currently a Postdoctoral Research Fellow at the Department of Economics at Stellenbosch University (SU). His main research interests include survey data analysis, analysis of poverty and inequality, the links between skills and labour market outcomes.

analysis of the performance of education systems, programme monitoring and impact evaluation. Carlos completed his PhD in Economics at Stellenbosch University in 2012, where his thesis dealt with issues on the analysis of poverty and inequality in Mozambique, issues with its education system and the links between skills and labour market outcomes.

Felix Masiye is a faculty member at the Department of Economics, University of Zambia. Felix has published a number of papers in health financing, economic evaluation, equity in health and health



system performance assessment. Currently, he is a co-investigator on the Malaria Control Policy Assessment project in Zambia, which is a collaborative project with the Institute for Health Metrics and Evaluation, University of Washington. Felix's recent area of work is in health programme evaluation, using observational data as well as randomised controlled experimental surveys. He was co-investigator on a project that evaluated the health and productivity impacts of an insecticide-treated bednet loan scheme in a malaria-endemic district in rural Zambia. Felix received his PhD in Economics from the University of Cape Town in 2005, and was a postdoctoral fellow at Harvard University from 2006–2008.



Victor Owusu is a Lecturer at the Department of Agricultural Economics, Kwame Nkrumah University of Science and Technology in Kumasi, Ghana.

His research and teaching cover a number of topics in economics including development economics and policy, statistics and econometrics, producer access to information and technology adoption, environmental economics, labour, land tenure and investment issues, and impact assessment of pro-poor policy interventions. His current research interest is applying randomised evaluations to test the impact of projects on food security, poverty reduction, and solid waste management in Ghana. He holds a PhD in Development Economics from the Vrije Universitiet, Amsterdam.



Vimal Ranchhod is an Associate Professor in the Department of Economics at the University of Pretoria. He has previously taught at Wits, Michigan, Yale and Cape Town, and was a postdoctoral fellow

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Lauren Tavener-Smith is a PhD student at Stellenbosch University, where she works with the Economics Department and the Sustainability Institute. Currently, she coordinates a group of postgraduate student researchers in a trans-disciplinary investigation around informal settlement upgrading of basic infrastructure. Lauren's research explores the economics of sanitation upgrading in a case study setting. She is using a variety of methods including small sample evaluations of a pilot to assess the technical, institutional and financial strategies that she has developed as part of her study. Her interest in understanding the formation of individual and collective demand for public goods has led to the addition of public goods and consumer choice experiments to her research toolkit.



Byela Tibesigwa is currently a Postdoctoral Research Fellow at the School of Economics, UCT. She is also a Research Fellow in Environmental Policy and Research Unit

(EPRU), which is part of the international EfD network and is based in the School of Economics, UCT, where she continues to learn new research methods. Her research work focuses on how social interaction and social norms affect individual risk-taking behaviours in environmental and health settings. She completed her PhD in Economics at UCT in 2012.



Ingrid Woolard is an Associate Professor in the School of Economics at UCT, and a Research Associate of SALDRU at UCT. Her areas of interest include labour market

analysis, social assistance and the measurement of poverty and inequality. Ingrid is the Chair of the Employment Conditions Commission, which advises the South African Minister of Labour on working conditions and minimum wages. She has been a Principal Investigator of South Africa's first national panel survey, the National Income Dynamics Study (NIDS), since 2007. Ingrid has worked as a consultant to the OECD, World Bank and UNDP in South Africa, Uganda, Namibia and Lesotho. She holds a PhD in Economics from UCT. Konstantina Velkushanova is a Postdoctoral Research Fellow at the Pollution Research Group (PRG) at University of KwaZulu-Natal, Durban. At PRG, she is managing two research projects: Properties of faecal sludge, funded by The Bill &



Melinda Gates Foundation; and co-digestion of sewage sludge and industrial concentrates, funded by the Water Research Commission. Konstantina's educational background is in environmental management and engineering and over ten years of work and research experience in this field, mainly focused on solid waste management, waste water and sanitation. She has previously worked at the Ministry of Environment and Water, Bulgaria where she was an expert on the preparation and implementation of environmental engineering projects supported by the European Commission. She obtained her PhD in the Civil Engineering Department at the University of Southampton.

BIOS: J-PAL TEAM



Grant Bridgman joined J-PAL Africa in 2012, where he develops research in the fields of skill development and labour in South Africa, as well as aiding capacity building projects across the continent. Grant has previously worked with Innovations for Poverty Action (IPA), J-PAL's partner organisation, in Sierra

Leone for 18 months doing field experiments. His projects in Sierra Leone included an evaluation of the impact of feeder roads on agricultural trade using a discontinuity design, several randomised evaluations in the cocoa industry and writing a baseline report for the International Fund for Agricultural Development. Grant holds a BS in Philosophy, Politics and Economics from the University of Cape Town.



Iqbal Dhaliwal is the global head of Policy for J-PAL. He works with policymakers in governments, international development organisations, foundations and NGOs to disseminate the policy implications of J-PAL's research. Before coming to J-PAL, Iqbal was a Director in the Economic

Analysis practice of a consulting firm in Boston. Prior to that, Iqbal was a member of the Indian Administrative Service (I.A.S.) where he worked on many public policy issues during stints as a Deputy Secretary in a state government, Managing Director (CEO) of a publicly owned company, and Sub Collector of one of the largest divisions. Iqbal received the Director's Gold Medal for standing 1st in the All India Civil Services Selection test. He holds an MA in Economics from the Delhi School of Economics and an MPA from Princeton University.



Kamilla Gumede is the Executive Director for J-PAL Africa at SALDRU, University of Cape Town. Her work involves working with governments and NGOs in Africa to decipher policy lessons about what works, help make policies more evidence-based and more effective, and collaborate with researchers

and policymakers to identify and run randomised evaluations that answer pertinent policy questions facing African decision makers. She has previously worked for the South African National Treasury to promote policy and capacity building in Africa and globally. This included work with the African Union, NEPAD, the African Development Bank and the Commission for Africa. She holds an MA in Economics from the University of Copenhagen, and an MA in Public Policy from the Woodrow Wilson School at Princeton University.



Leah Horgan joined J-PAL's Global Office in 2010 and is responsible for web design, data visualization, and managing and designing J-PAL's policy publications and other outreach materials. Additionally, she assists in producing J-PAL's program and initiative conferences. Leah holds a BFA in Graphic Design

from NESAD at Suffolk University. Aside from art, design, and interactive communication, her interests include nutrition, gender inequality and class issues, and social networks.



Bryan Plummer has spent over five years working for J-PAL on a microfinance and social networking study in India, two impact evaluations in Liberia on post-conflict peace education and ex-combatant reintegration programs, and most recently on a coffee agronomy training program evaluation in

Rwanda. He has also spent substantial time at the J-PAL Global office in Cambridge developing research resources for J-PAL field researchers, as well as contributing to the partnership development team. Bryan joined the J-PAL Africa headquarters in Cape Town in 2012 to further support J-PAL field studies and various capacity building projects across the continent. He holds a BA in International Development from McGill University.



BIOS: USI TEAM

USI CO-CHAIRS



Esther Duflo is the Abdul Latif Jameel Professor of Poverty Alleviation and Development Economics in the Department of Economics at MIT, a founding director of J-PAL, and USI Co-chair. She is an NBER Research

Associate, and serves on the board of the Bureau for Research and Economic Analysis of Development (BREAD). Her research focuses on microeconomic issues in developing countries, including household behaviour, education, access to finance, health and policy evaluation. Esther has received numerous academic honors and prizes including the David N. Kershaw Award (2011), the CNRS Médaille de L'Innovation (2011), John Bates Clark Medal (2010), a MacArthur Fellowship (2009), the inaugural Calvó-Armengol International Prize (2009), the "Best French Young Economist Prize" (Le Monde/Cercle des économistes, 2005) and the American Economic Association's Elaine Bennett Prize for Research (2003). Esther holds a PhD in Economics from MIT.



Sebastian Galiani is a Professor of Economics at Maryland University and USI co-chair. He works in the areas of Development Economics and Applied Microeconomics. He published papers in the Journal of Political Economy, Quarterly Journal of Economics, American Economic Journal, Review of Economics

and Statistics, Journal of Public Economics, Journal of Development Economics, Economic Development and Cultural Change, Regional Science and Urban Economics and Labour Economics, among others. His work has been featured in Science, The Economist, The Wall Street Journal, The Times and various other newspapers around the world. Sebastian holds a PhD in Economics from Oxford University.



Mushfiq Mobarak is an Associate Professor of Economics at Yale University and USI co-chair. He has two main lines of research: (I) field experiments exploring ways to induce people in developing countries to adopt technologies or behaviors that are likely to be welfare improving, and (2) using field

experiments and other methods to study the management of water resources and other infrastructure. He has ongoing experiments in Bangladesh, India, Malawi and Uganda on migration, sanitation, rainfall insurance, and environmental technologies (stoves, rainwater harvesting, and conservation agriculture). Mushfiq holds a PhD in Economics from University of Maryland at College Park.

INITIATIVE MANAGER

The USI INITIATIVE MANAGER provides day-to-day management for USI, and coordinates all the activities of the initiative.



Jasmine Shah is a Policy Manager based at J-PAL Global at MIT, and the USI Initiative Manager. He has over six years of experience in management, advocacy and policy outreach in developing countries having worked first at ITC, a leading private sector firm in India, managing engineering

and infrastructure projects, and then at Janaagraha Center for Citizenship and Democracy (a Bangalore based nonprofit) as the National Coordinator of an urban voter registration campaign that was successful in registering over 620,000 youth in 35 cities during the 2009 parliamentary elections in India. Jasmine holds a MPA from Columbia University where he was a Fulbright-Nehru Fellow. *jshah@povertyactionlab.org*

RESEARCH MANAGER

USI RESEARCH MANAGERS provide support to the research projects in the field and work with potential partners to identify new opportunities to conduct impact evaluations.



Laura Costica is a USI Research Manager based at J-PAL Africa. Previously, she worked with Innovations for Poverty Action in Nigeria, where she managed a randomised controlled trial of a maternal mortality reduction project in the North of the country. Laura has experience conducting

field research in urban and rural India. In Gujarat, she worked on several urban development and governance projects commissioned by policy makers in the state. In Tamil Nadu, she managed a survey profiling the health status of rural populations. Laura holds a Master of Science in International Economics from the University of Essex and a Bachelors of Arts in Economics from Nottingham Trent University. *lcostica@povertyactionlab.org*



Mahreen Khan is a USI Research Manager based at the Bangladesh country office of Innovations for Poverty Action (IPA). She has been working at IPA since July 2011 as Project Coordinator, managing a randomised evaluation, funded by the Gates Foundation, to bolster demand for sanitation in

rural Bangladesh. Mahreen has extensive research and corporate management experience in the international sector. She has worked as a consultant at the OECD in Paris, and as a financial analyst at Credit Suisse in New York and London. Mahreen holds a Master in Analytical and Policy Economics from the Paris School of Economics, and dual undergraduate degrees in Economics and Management Science from MIT. *mkhan@poverty-action.org*



Anantika Singh is a USI Research Manager based at J-PAL South Asia. She has over nine years of multifaceted exposure to the corporate as well as the development sector. Prior to joining J-PAL, Anantika worked as a Consultant to the Ministry of Home Affairs, Government of India, on a national

security project, where she was responsible for creating the strategy and implementation plan for the project. In past roles, she has been responsible for establishing processes and best practices, setting up teams and overall planning and communications. Anantika holds a Master's degree in Social Work from Delhi University and a Bachelor's degree in Sociology from Delhi University. *anantika.singh@ifmr.ac.in*

POSTDOCTORAL RESEARCHERS

USI POSTDOCTORAL RESEARCHERS are dedicated local researchers who engage in a research agenda that is in line with USI's research objectives and priorities. They will partner with J-PAL, USI affiliates and implementing partners in the relevant region to conduct USI-funded, randomised evaluations.



Mūthoni Ngatia is a USI Postdoctoral Researcher based at J-PAL Africa and an in-coming Assistant Professor at the Economics Department at Tufts University. Her research interests lie in development economics and much of her research uses field experiments. She has worked in Kenya and Malawi.

Muthoni holds an AB in Applied Mathematics and Economics from Harvard University, and a PhD in Economics from Yale University. *mngatia@povertyactionlab.org*



Atonu Rabbani is a USI Postdoctoral Researcher based at IPA Bangladesh. Primarily an applied microeconomist, he uses both experimental and observational methods to identify impacts of programmes pertaining to local government's role in encouraging effective sanitation in rural areas, and

impact(s) of a large-scale ultra-poor programme in the disaster prone areas of Bangladesh. He teaches economics at the University of Dhaka, and has worked as a post-doctoral fellow in the Department of Medicine at the University of Chicago. He has studied economics at the University of Dhaka, and the University of Chicago. *jshah@ povertyactionlab.org*



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