Sanitation Research Symposium

Great Lakes University of Kisumu, Kenya
30th April 2015

Background

GLUK and the SHARE Consortium of the London School of Hygiene & Tropical Medicine are convening a Sanitation Symposium as part of GLUK's 12th annual Tropical Institute of Community Health and Development (TICH) Conference. The Symposium will bring together sector stakeholders in research, policy and practice with three central aims: First, to re-enforce the linkages between the national Sustainable Development Goal (SDG) targets and their county-level counterparts in Kisumu in post-2015. Second, to draw on existing research and evidence to discuss the challenges of meeting the SDGs on sanitation and hygiene – with their new focus on universal and equitable access, behaviour change and service provision beyond the household. Third, to create a forum for discussion on persisting knowledge gaps and research priorities, as well as the new proposed research project by Symposium hosts GLUK.

Agenda

Symposium Moderator: Yolande Coombes, Senior Sanitation & Hygiene Specialist, Water and Sanitation Programme (WSP), World Bank

Session	Topic	Mode	Responsible
8:00-8:30	**Devotions**		
8:30-8:35	**Welcome**	Plenary address	Professor Dan Kaseje, Great Lakes University of Kisumu (GLUK)
8:35-8:45	**Introduction to the day's proceedings**	Plenary address	Symposium Moderator
8:45-9:00	**Keynote address**	Plenary address	Dr. Kepha Ombacho, Director of Public Health, Ministry of Health (MoH)
30 mins	**SESSION 1: SETTING THE SCENE** *A brief overview of the WASH architecture in Kenya*		Facilitated by the Symposium Moderator
9:00-9:10	**International post 2015 framework and its national counterpart** • *From MDGs to SDGs – what has changed for S&H?* • *Aligning SDG targets and other international commitments with the national action plan*	Presentation in plenary	Dr Kepha Ombacho, Director of Public Health, Ministry of Health (MoH)
9:10-9:20	**County level post-2015 framework** *What are counties and in particular Kisumu committed to delivering, and what plans and resources are in place for each to achieve this?*	Presentation in plenary	Arthur Shikanda, Kisumu County Public Health Officer
9:20-9:30	**Questions and discussion**	Plenary	All participants
3hr 50	**SESSION 2: MEETING THE SDG TARGETS: USING WHAT WE KNOW** *Critical assessment of three main elements that distinguish the SDGs from the MDGs, evaluation of possible challenges that these represent to the sector, and*		Facilitated by the Symposium Moderator

	how research can help overcome them.		
9:30-9:40	**What role must research play in improving sector performance and accelerating progress?**		Professor Mohamed Karama, Policy, Research and Advocacy Technical Working Group (TWG) Chair
20 mins	**COFFEE BREAK**		
10:00-11:00	**Sanitation and hygiene behaviour change –** *What can we learn from existing research?* 1. SuperAmma Handwashing with soap campaign 2. WASH Benefits Study 3. SHARE's Systematic Review of Menstrual Hygiene Management. 4. Social Marketing for Improved Sanitation Presentation **Questions and discussion**	Plenary presentations 10 minutes each (10 slides max.) Plenary 20 mins	1. Joanna E Mills, Policy Research Manager, Sanitation and Hygiene Applied Research for Equity (SHARE) Consortium 2. Geoffrey Nyambane, WASH Benefits 3. Belen Torondel, Lecturer at London School of Hygiene and Tropical Medicine (LSHTM)/ SHARE 4. Lillian Mbeki, WSP-Africa
11:20-12:50	**Universal and equitable access –** *What can we learn from existing research?* 1. Disparities in water, sanitation and hygiene-related exposure and outcomes in peri-urban communities: A GLUK/SHARE Study in Kisumu, Kenya. 2. Capturing socio-ecological complexities in peri-urban water and sanitation to frame challenges to achieving universal coverage in peri-urban Kisumu. 3. Household water and weaning food contamination with enteric pathogens in a peri-urban setting: Case study of Nyalenda A & Nyalenda B and Kanyakwar Slums in Kisumu, Kenya. 4. Sanergy: sustainable sanitation in Nairobi's informal settlements 5. Shared sanitation and universal coverage, is it an improved form of sanitation, or not? 6. Benchmarking sanitation for the SDGs **Questions and discussion**	Plenary presentations 10 minutes each (10 slides max.) Plenary 20 mins	1. Jane Mumma, Director for the Tropical Institute for Community Health and Development at GLUK 2. John Anderson, PhD student, University of Florida 3. Lily Lukorito, PhD student at GLUK 4. Sarah Lebu, Sanergy 5. Belen Torondel, Lecturer, LSHTM/SHARE 6. Yolande Coombes, Senior Sanitation and Hygiene Specialist Water and Sanitation Program (WSP)
1 hr 10	**LUNCH**		
14:00-14:50	**Sanitation and hygiene beyond the household –** *What can we learn from existing research?* 1. Towards progressive realization of the WASH in schools agenda: targeting school management for behavior change. 2. Soapy Water Handwashing Stations: Pilot Study in Peri-Urban Kisumu 3. Payment for sanitation in the informal settlements of Kisumu, Kenya: a hedonic approach	Plenary presentations 10 minutes each (10 slides max.)	1. Beverly Mademba, Program Manager, WASH in Schools Program, WASH United Africa 2. Jaynie Whinnery, Senior Research Associate, Innovations for Poverty Action 3. Sheillah Simiyu, PhD student, Stellenbosch University

	Questions and discussion	Plenary 10 mins	
	SESSION 3: DEFINING WHAT WE DON'T KNOW *Identification and discussion of persisting knowledge gaps*		
14:50-15:00	**National research priorities for Kenya:** Feedback from the Policy, Research and Advocacy Technical Working Group on persisting knowledge gaps/areas for continued/new research investment	Plenary address/ presentation	Professor Mohamed Karama, Policy, Research and Advocacy TWG Chair
15:00-15:10	**Building national research capacity:** strengthening national monitoring and evaluation capacity	Plenary address/ presentation	Benjamin Murkomen, Public Health Officer on M&E, MoH
15:10-15:20	**Questions and discussion**	Plenary	Professor Mohamed Karama, Policy, Research and Advocacy TWG Chair
15:20-15:30	**GLUK/SHARE research proposal 2015-2018**	Plenary presentation	Jane Mumma, GLUK
10 mins	**COFFEE BREAK**		
15:40-16:40	**Questions and discussion:** *Constructive feedback on the relevance and rigour of the proposed research by GLUK with SHARE funding, around the following:* • **Alignment with existing data sets:** *What relevant data exist already? What is the relevance of new data generated by the study and how can its wider use be encouraged?* • **Linkages with existing studies** • **Methodology** • **Relevance to sector priorities**	Group work	Facilitated by Prof. Dan Kaseje, GLUK
16:40-16:45	**Wrapping up and next steps**		Symposium Moderator
16:45	**Closing remarks**		Professor Dan Kaseje, GLUK

KENYA

GLUK-SHARE Sanitation Research Symposium, Great Lakes University, Kisumu.

From MDGs to SDGs

By,

Kepha Ombacho, PhD, MBS,

Director, Public Health

Division of Environmental Health

MINISTRY OF HEALTH.

Introduction

- Globally, there is consensus that post-2015 targets for WASH should build on the MDGs and address '**unfinished business**' as a first priority.

- MDGs in Kenya date back to the sessional paper no.10 of 1965 which focused on the elimination of **poverty**, **disease** and **ignorance**.

- Subsequent government policy documents have since then focused on mainstreaming MDGs into policy, planning and budgeting process

Overview of MDG in Kenya

- Kenya started implementation of MDGs in september2002 and the MDGs based planning was launched in 2004.

- Mainstreaming MDGs in Kenya has been done under two themes;

- "Mainstreaming MDGs in Kenya's Development Process" - 2004-2009.

Cont…

- " Mainstreaming, accelerating and coordinating MDGs in Kenya's development process"-2011-2013
- A Needs Assessment Study was carried out in 2005 to establish the resources required to achieve the MDGs by 2015; **The financing gap stood at Ksh 4.1 trillion**
- The Needs Assessment informed on the need for an aggressive mainstreaming and advocacy campaign for the MDGS

MDGs Based Planning In Kenya

- The Economic Recovery Strategy(ERS) of 2002-2007 addressed most of MDGs through recognition of key Economic sectors.
- Kenya's Vision 2030 incorporated the MDGs. The first Medium Term Plan (MTP 2008-2012) aimed at accelerating the achievements of MDGs by redirecting spending to high priority areas.

Cont..

- Sector Plans 2008-2012 which were drawn from the Vision2030 and its 1st MTP also mainstreamed MDGs.
- Corresponding District Development Plans also ensured that local level planning and budgeting in all districts was responsive to the MDGs.
- National Integrated monitoring & Evaluation system (NIMES) the tool used for tracking & reporting on Vision 2030 flagship projects, also reports on MDGs through sector reporting

Mainstreaming MDGs in to County Profiles and MTP II

- The Vision 2030 is a long term national policy framework to be implemented through 5 year medium term plans.
- The just launched MTP II process will incorporate MDGs and their targets.
- Interim County development plans are expected to mirror image of the Kenya Vision 2030 at the county level and are expected to ensure that local level planning and budgeting in all counties is responsive to MDGs

KENYA SANITATION VISION

- 100% of Kenya's population will access minimum WASH standard package by 2030.

- **Focus for 2014-2016**
- Kenya will focus on declaring open defecation free to benefit at least 75% of the community currently defecating in the open.

Water Access

	JMP 2014	MDG
Urban	83%	94%
Rural	54%	72%

Sanitation Access

	JMP 2014	MDG
Urban	31%	65%
Rural	29%	63%

Nationally

	Improved	unimproved
Water	61%	39%
Sanit	30%	70%

Health Impact; Under 5 diarrhoea prevalence i**s** **17%** in Kenya, and higher amongst poorer households

Bottlenecks

- Inadequate Financing for WASH-especially for Sanitation from the National Treasury.
- Lack of Inclusion of Hygiene and hand-washing indicators in the monitoring framework in the past & weak reporting.
- Shortage of technical staff in WASH Sectors.
- Equity Inclusion in sanitation

Tools Used; 2013 Global Analysis for Water & Sanitation (GLAAS)

Tools used; Bottleneck Analysis

Linkage with Global & Regional Commitments

Key achievements:

- **Political Prioritization:** Kenya has engaged Partners in the urban technical working group and the Enabling Environment
- **National Processes:** The country has strong coordination mechanism which meets on, quarterly basis and they have developed protocol for CLTS.

Slow achievement:

- **National Processes:** Inclusion of hand-washing with soap and household water treatment in current ODF road Map.

Commitments carried over to 2014:

1. **Financial:(i)**Strengthen and Advocate for increase for budgetary line for WASH in the new county governments

   (ii) Developing investment plan for WASH in all the sectors,
2. **M & E: Harmonize/** Operationalized a sector-wide WASH indicators monitoring and evaluation system
3. Hygiene and hand-washing indicators in the monitoring framework

2014 Commitments Aligned with e-Thekwini

FINANCIAL

- Strengthen and Advocate for increased budgetary line for WASH in the new county governments
- Developing investment plan for WASH in all the sectors

M & E

- Finalize and strengthen M & E frameworks for 47 counties building on 2012 achievements
- Harmonize & Operationalize a sector-wide WASH indicators monitoring and evaluation system to include hand washing with soap.

POLICIES

- Harmonizing & revise of Water Policy , Sanitation Policy & ODF road Map to align them with the constitution of Kenya for Operationalization in the devolved government structure by 2016.

CAPACITY

- Declaring open defecation free to benefit at least 75% of the community currently defecating in the open and certified by decentralized third party.
- Capacity development and mapping to address WASH and CLTS road map

Kenya Strategies

The Kenya's Sanitation strategic plan (**2010-2015**) underscores three strategic thrusts;

1. **Sustainable demand creation** for sanitation and hygiene through BCC,
2. **Sanitation marketing** to foster and sustain latrine/sanitation/hygiene facilities quality improvement,
3. **An enabling framework** responsive to and facilitating an accelerated scaling up through policy and legislation, coordination, comparative monitoring,

Kenya Post 2015

- Focus at universal Access to Sanitation and safe water
- Equity inclusion in Sanitation and Hygiene services
- Behaviour Change communication-changing from infrastructure to changing behaviour to eliminate open defecation
- Focusing on and encouraging communities to climb up the Sanitation ladder and Not settling on basic latrine

Kenya Post 2015

- Focus on households and institution Like schools, Health facilities and Non-institutions like market places

- Sludge management in urban and peri-urban for ALL

- Focus on Sustainability of the Sanitation interventions through Sanitation marketing

THANK YOU

GLUK-SHARE Sanitation Research Symposium 30th April 2015

PRESENTATION
BY
ARTHUR L. SHIKANDA
COUNTY PUBLIC HEALTH OFFICER
KISUMU

County commitments, plans and resources for sanitation

Presentation outline

- Introduction
- Sanitation commitments
- County sanitation plans
- Achievements
- Challenges
- Way forward

Introduction

- Kisumu County is ranked 10 out of the 47 counties (WSP)
- Despite this 31.3% person still use unimproved latrines 30% use improved latrines, 25.9% share latrines.
- The biggest challenge to the county is the 12.9% who still defecating in the open.
- Kisumu county loses 740m due poor sanitation
- The loses are due to:
  - -access
  - -time,
  - -premature deaths
  - -healthcare costs
  - -Loss of productivity
- All this is happening despite sanitation being a constitutional right
- It is our responsibility to ensure proper sanitation to the community

…….cont'd

- Our progress in CLTS, is not encouraging either.
- Kisumu County has a total of 1,373 villages out of which only 483 have been triggered with 354 progressing to achieve an ODF status.
- The sub county performance is as follows:

  - Nyakach with 425 villages - 133 villages triggered and 126 ODF.

  -Muhoroni with 222 villages triggered 20 with 14 ODF.
  -Kisumu East with 257 villages, has 7 and 2 have ODF. ----
  -Kisumu West with 195, has 43 triggered and 20 ODF.

  -Seme with a total of 242 has 139 triggered and 55 ODF.
- Nyando with 149 villages – all are ODF

Sanitation commitments

- During the national sanitation conference in April 2014 the county made the following commitments:
- Deliver additional 30% of the villages ODF
- Mobilize financial resources to support sanitation activities
- Advocate for political support from MCAs and top County govt. officials for increased sanitation focus and funding
- Other commitments included – hand washing both in facilities and in the community from 68% to 100% and 13% to 30% respectively.

County sanitation plans

- Capacity mapping to identify the strengths and areas that need reinforcement and proper staff utilisation.
- Capacity building
  - Training of PHOs and CHEWs in CLTS
  -Training of PHOs in monitoring and evaluation
  - orientation of CHVs & natural leader in CLTS.
  - Training of county 3rd party certifiers
- Enhanced CLTS activities
- Establishment of county ICC to coordinate activities and enhance collaboration.

County sanitation plans cont.

- Sanitation advocacy
- Sanitation marketing
- Sanitation improvement in informal settlements within our urban centres

  -Bio centres

  - Urban CLTS?

Achievements

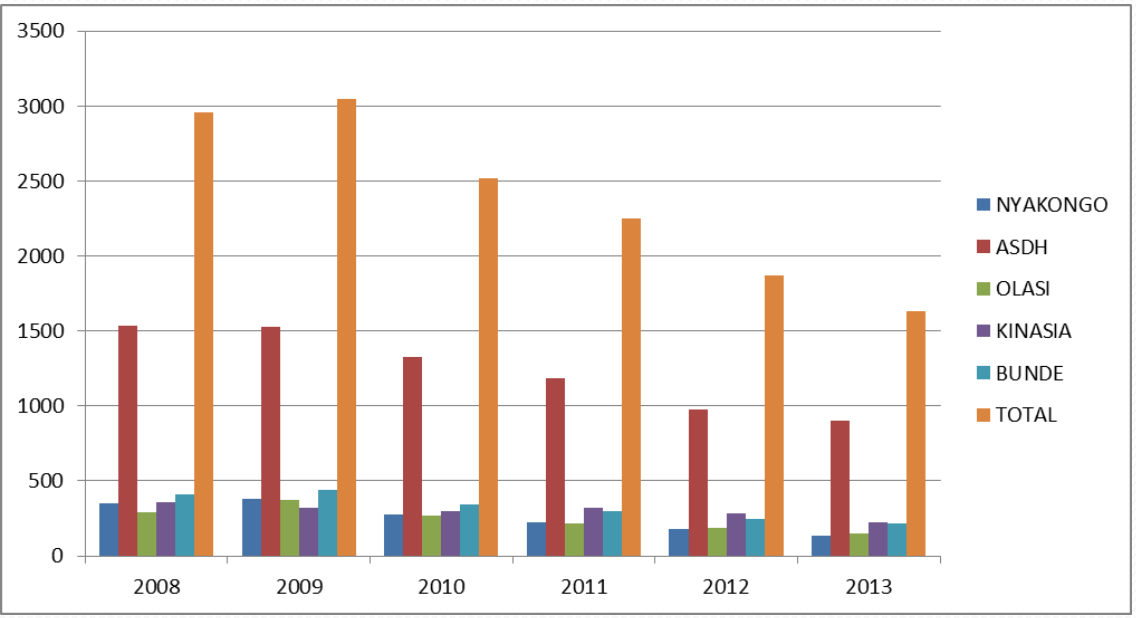
- One sub county – Nyando, is ODF
- ODF villages in the county is at 32% from 30%
- Reduction of reported diarrhoeal disease reported in in health facilities (graph & chart)
- Capacity building

  -Training of all PHOs and CHEWs in CLTS

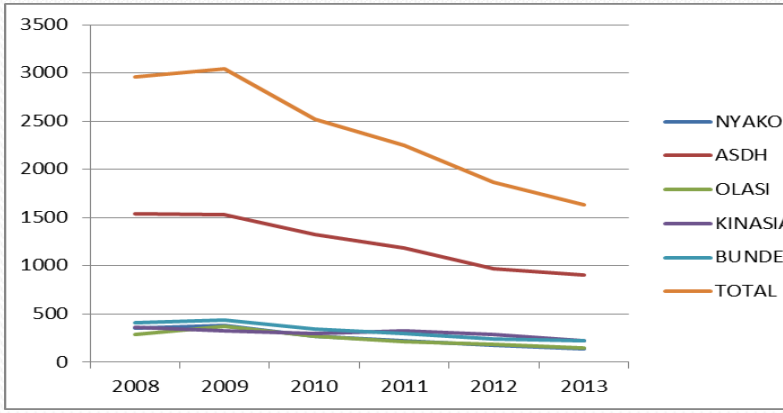
  - Training of PHOs in M&E

  - Trained county 3rd party certifiers
- Capacity mapping done.

Trends of diarrhoeal diseases



chart



Graph

Challenges

- Floods
- High water table.
- Socio cultural beliefs.
- Scarce resources.
- Soil structure either rocky or black cotton soils.
- Subsidy by previous donors.

Way forward

- To empower and partner with the community through CLTS approach for them to realise good sanitation.
- Advocate for improved sanitation funding
- Emphasise sanitation marketing
- Strengthen collaboration with all partners and stakeholders.
- Sustainability

Community innovation – use of lick tin

Use of local resources

Ash is used as disinfectant

Fly and odor control using ash

Age or gender was no hindrance

A lady digging her toilet in Nyando

An empowered community

Local administration

community tracking disease trend

Age was no barrier

An elderly grand mother

Commendable effort

THE ROLE RESEARCH MUST PLAY TO ACCELERATE PROGRESS IN WASH IN KENYA

M. KARAMA
PHHSRP
RESEARCH POLICY AND ADVOCACY TWG

EVIDENCE BASED APPROACH

- RESEARCH MUST GUIDE WHAT WORKS IN TERMS OF:

COST,

SCALE

REGIONAL ACCEPTANCE

DYNAMIC (technology and time)

ADDRESS VULNERABILITY IN ACCESS

- BOTTOM OF THE PYRAMID
- POVERTY
- ECOLOGICAL BARRIERS
- DISASTER PRONE ZONES

EQUITY AND INCLUSION

- DISABILITY
- THE OLD AGE
- INFECTED AND DISCRIMINATED
- MENTALY UNSTABLE
- THE YOUNG
- INSECURE

ESTABLISH COMMUNITY COMMUNICATION STRTEGY

- INNOVATIVE COMMUNICATION eg social media
- MECHANISM TO CREATE DEMAND FOR SANITATION
- ENTERPRENUERSHIP IN SANITATION
- MANUFACTRERS AND MICROFINANCE
- SANITATION MARKETING

RELEVANCE IN TIME

- MENSTRUAL HYGIENE
- WORKING WITH OTHER SECTORS eg n
- NUTRITION, (GRANT MATCHING)
- EDUCATION,
- ACADEMIA (QUICK GAINS)
- NETWORK

TURNING THE TABLES

- UNDERSTANDING THE CHALLENGES OF THE DEVOLVED GOVERNMENT SYSTEM
- TURN THREATS TO OPPORTUNITY
- ESTABLISH TECHNOCRATIC SYSTEM TO PREVENT TRANSITION EFFECT (2017)
- SANITATION TO BE POSITIVELY VISIBLE

RELATE TO AREAS OF CONCERN

- MATERNAL AND CHILD HEALTH

  REDUCTION OF INFANT AND MATERNAL MORTALITY
- NEGLECTED TROPICAL DISEASES

  TRACHOMA, SOIL TRANSMITTED HELMINTHS SCHISTOSOMIASIS
- SANITATION AND HIV

THANK YOU

SuperAmma

Innovation in HWWS behaviour change

Joanna Esteves Mills (SHARE/LSHTM)

Overview

1. **HWWS - the challenge**
2. **Case study – SuperAmma**
3. **Behaviour-centred design**

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icddr,b
iied
SHACK / SLUM DWELLERS INTERNATIONAL [SDI]
WaterAid
share

The problem

HWWS is important...

1. **Impacts substantially on health**
   - Two main killers of children: diarrhoea & resp. infections (Liu et al., 2014, *Lancet*)
   - Impact of HWWS: 47% reduction in diarrhoea (Curtis & Cairncross, 2003, IJE 2010). 23% reduction in resp. infections (Rabie & Curtis 2005, updated with Luby & Sandora, 2005)
2. **Most cost-effective of WASH interventions** (DCPP2, 2006)

Most people know it is important

92% of respondents in Kenya knew that germs on hands cause diarrhoea (Curtis et al., 2009)

Yet HWWS is rarely practiced

Prevalence of HWWS after contact with faeces = 19% (Freeman, TMIH, 2014)

Behaviour is hard to change

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Our challenge

- To promote handwashing with soap at key times

- Using no health messages
- No mass media

- Ensuring potential for scaling up
  - Small intervention team
  - Limited contact time

- Evaluating behaviour change

MEDICINE

SuperAmma

http://www.superamma.org/campaign-film.html

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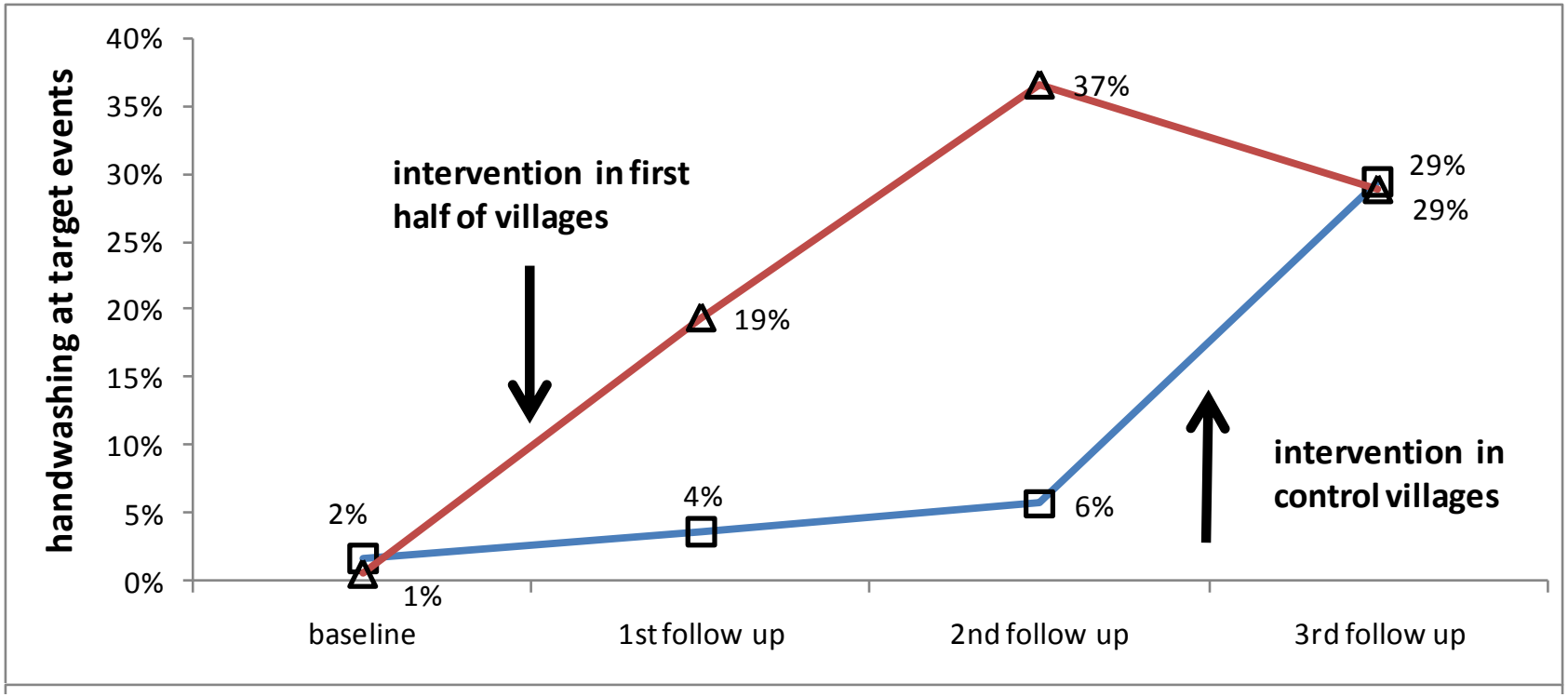
SuperAmma



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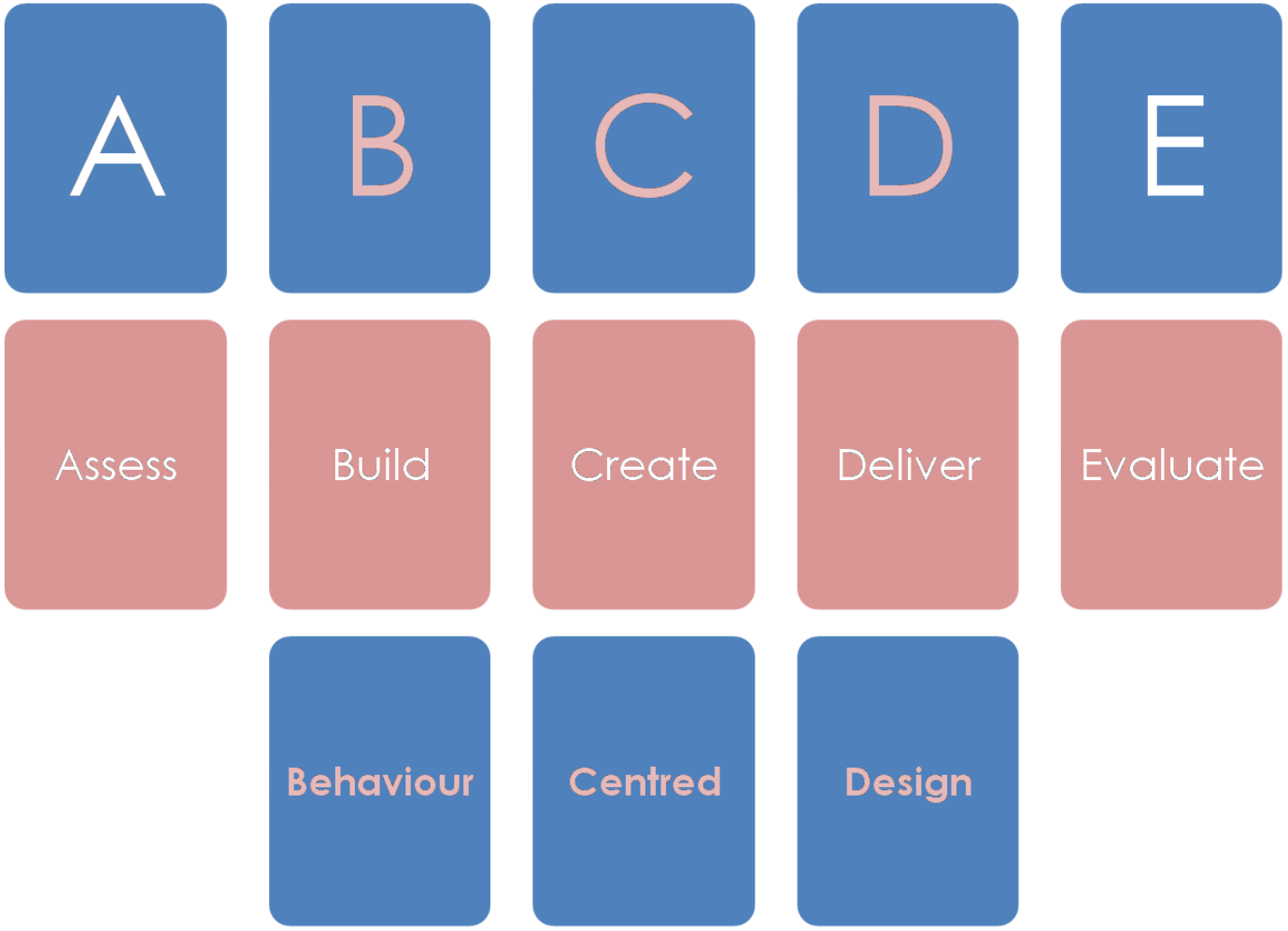
Behaviour-centred design



Hygiene Centre, LSHTM, SHARE
Wellcome Trust, Unilever

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Behaviour-centred design

Manners

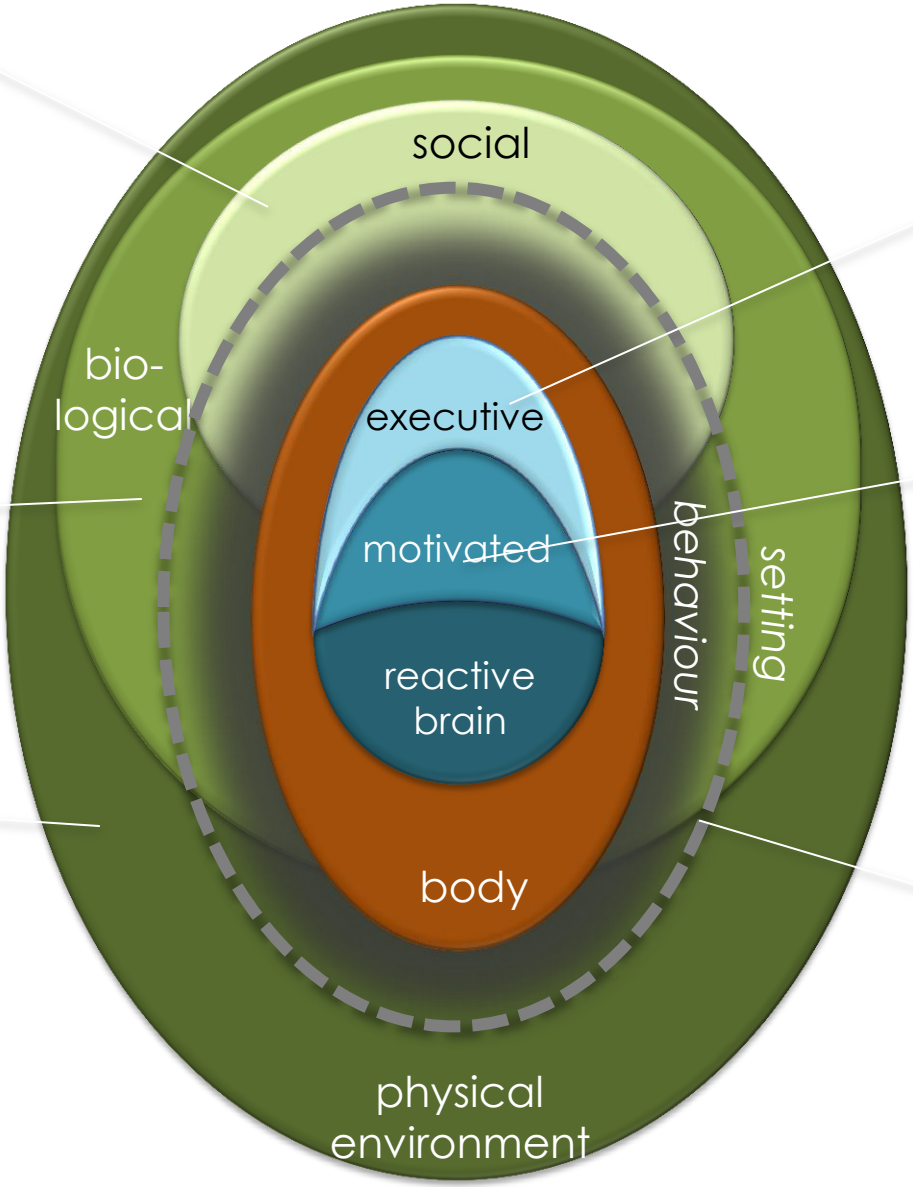
Pledging

Disgust
Nurture
Status
Affiliation

Contamination

Facilities
Cues

Routine



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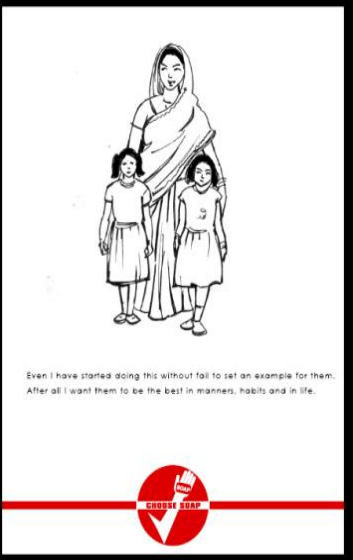
Vital: formative research

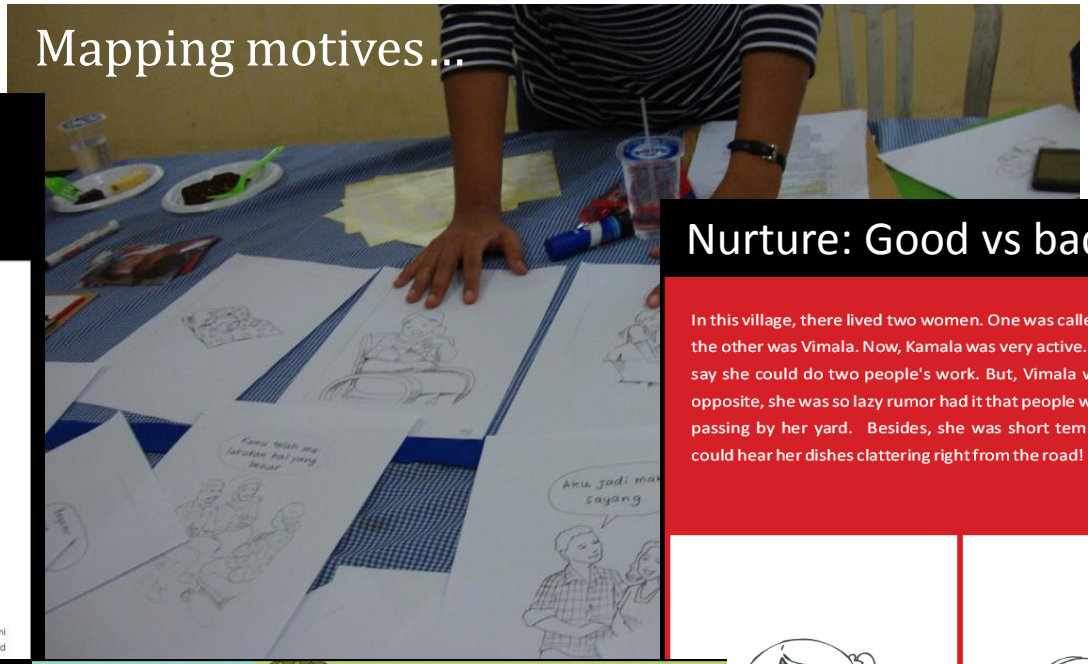
Testing motives…

nurture



status

Mapping motives…



Nurture: Good vs bad mum

In this village, there lived two women. One was called Kamala. And the other was Vimala. Now, Kamala was very active. Others used to say she could do two people's work. But, Vimala was exactly the opposite, she was so lazy rumor had it that people would yawn just passing by her yard. Besides, she was short tempered and you could hear her dishes clattering right from the road!

Style…

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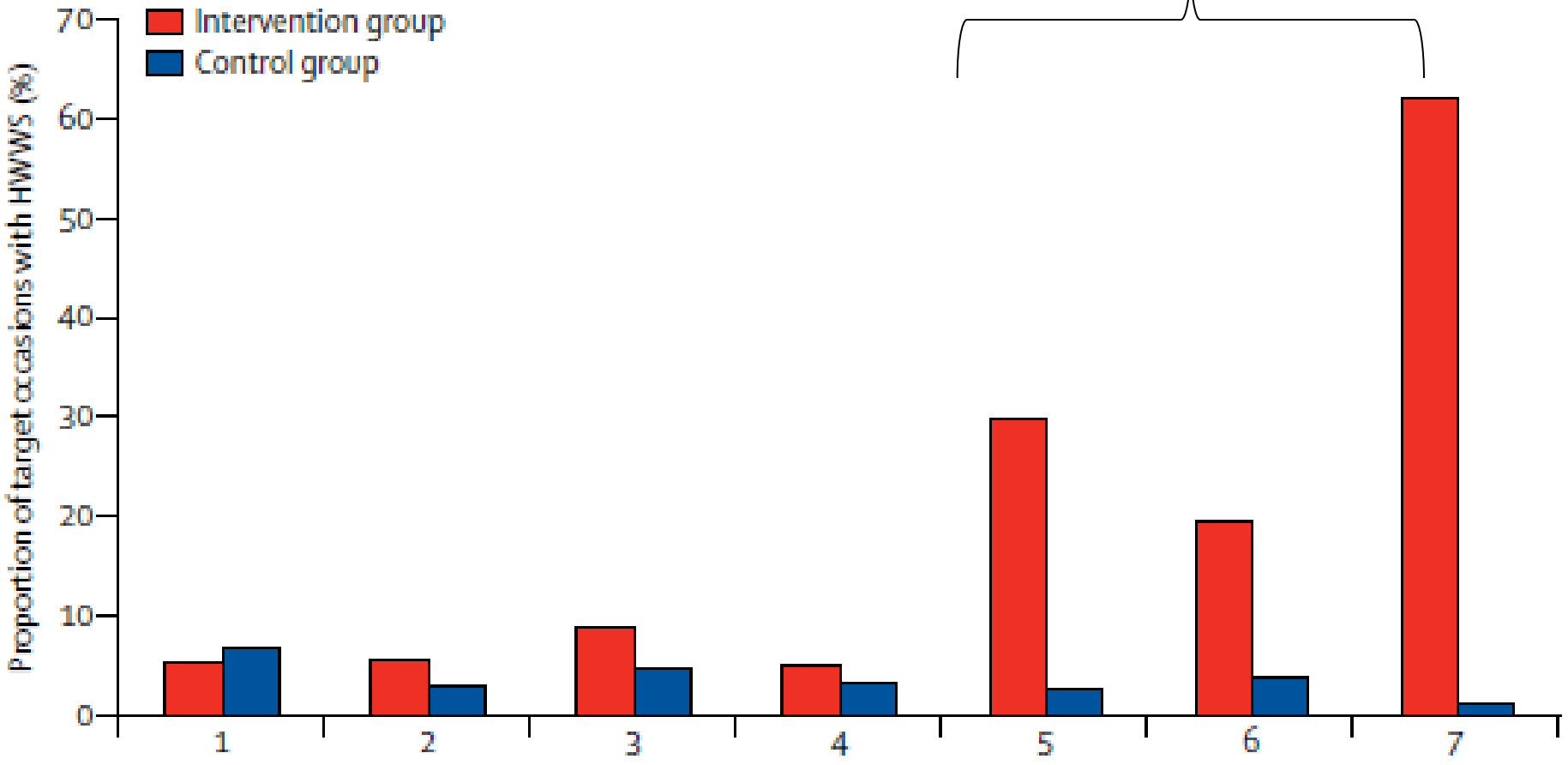
Vital: evaluation

Intervention effect varied by village

What could explain this?



Conclusions

Behaviour:

- is not all cognitive, rarely about health
- evolved for adaptive needs
- is outsourced to habit, settings

Behaviour change needs:

- new approaches to Formative Research
- powerful levers
- creative capacity
- Intervention science plus evaluation

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Useful links and references

- Biran et al (2014). Effect of a behaviour-change intervention on handwashing with soap in India (SuperAmma): a cluster-randomised trial. *Lancet Global Health, 2,* e145-154
- Curtis et al., (2011) Hygiene: new hopes, new horizons. *Lancet Infectious Diseases, 11,* 312-21
- Curtis et al., (2009). Planned, motivated and havbitual hygiene behaviour: an eleven country review. *Health Education Research, 24* (4), 655-73
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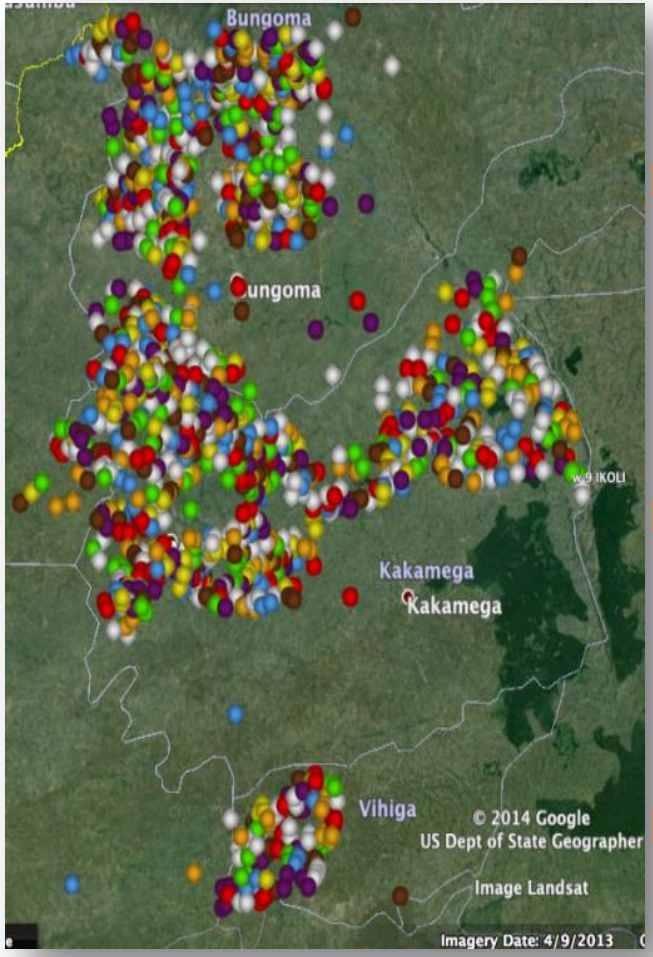
Behavior Change Strategies in Wash Benefits Research Project

By
Geoffrey Nyambane
Project Director

April 30, 2015

Purpose

- The goal of the WASH Benefits study is to generate rigorous evidence about the impacts of sanitation, water quality, hand washing, and nutrition interventions separately and in combination on child health and development in the first years of life (0-24 months)



- **Kakamega**
- **Bungoma**
- **Vihiga**

Study arms and interventions

Study Arm	Intervention (s) Delivered
Improved Water Quality	Chlorine dispenser + 1 liter bottle chlorine
Improved Sanitation	Latrines/latrine slabs, CFR tools
Improved Hygiene	Dual tippy taps for hand washing with soap
Nutrition	Lipid based nutrient supplements (LNS)
WASH	All water, sanitation and hygiene interventions
WASH +	All water, sanitation and hygiene interventions + Nutrition
Active Control	Monthly promoter visits
Passive Control	True Control

Sanitation and Hygiene arms

- We have 8248 study participants in the project
  - 3643 participants are in single and combined hygiene and sanitation arms
    - 1533 Bungoma County
    - 1886 Kakamega County
    - 224 Vihiga County

The BC Program

Behavior Change Communication: Delivery of hardware without the software component has been shown to be ineffective in creating lasting behavior change and improved health impacts.

IPA Assistants: Play an important role in facilitating behavior change by promoting the use of the interventions and the benefits of using them.

- The IPAAs provide the 'software': behavior change communication messages compliment the hardware interventions

The goal of the BC Program is to increase uptake of hardware by increasing behavior change, in order to improve health outcomes.

Promoters (IPAAs)

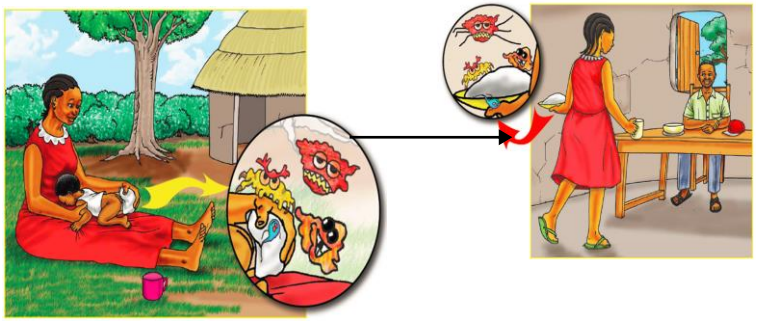
- Community members nominated by study participants
- 1 promoter / 10 respondents in single arms;
  - 1 / 8 in combined arms
- Approximately monthly visits (plus a few more during intervention delivery)
- Active control visits at same frequency (MUAC)
- Monthly phone contact w/ BC staff
- Monthly appreciation (~$15)
- 3-6 days of initial training
  - Communication skills, BC materials, reporting

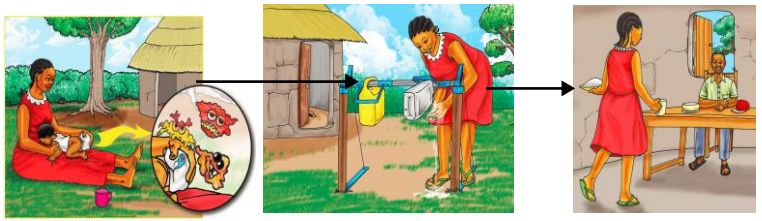
Roles of IPAAs

- 1031 IPAAs in the study
  - 539 in hygiene and sanitation arms (Kakamega =276, Bungoma=230, Vihiga = 33)
- Roles:
  - Have meetings with study mothers and other compound members for approximately 1-3 hours per month.
  - Check state of interventions and promote their usage
  - Provide monthly reports to WASH B on predetermined indicators through phone calls
  - Serve as a key link between IPA/WASH B and the target households/community
  - Assist with other duties such as tracking births of study children

Visit Scripts & Other Materials

- Visit scripts are lessons for the IPAAs to use when visiting study households
  - They present a set of messages that are organized in an activity format that take ~45 to complete
- They provide the IPAA with activities, time frames, methods and materials to engage the target group
- Other Complimentary aids
  - 2-page summary sheets
  - Cue cards
  - Picture Sheets
  - Calendars
  - Stickers





BCC Program Materials (Cont'd)

BCC materials development based on:

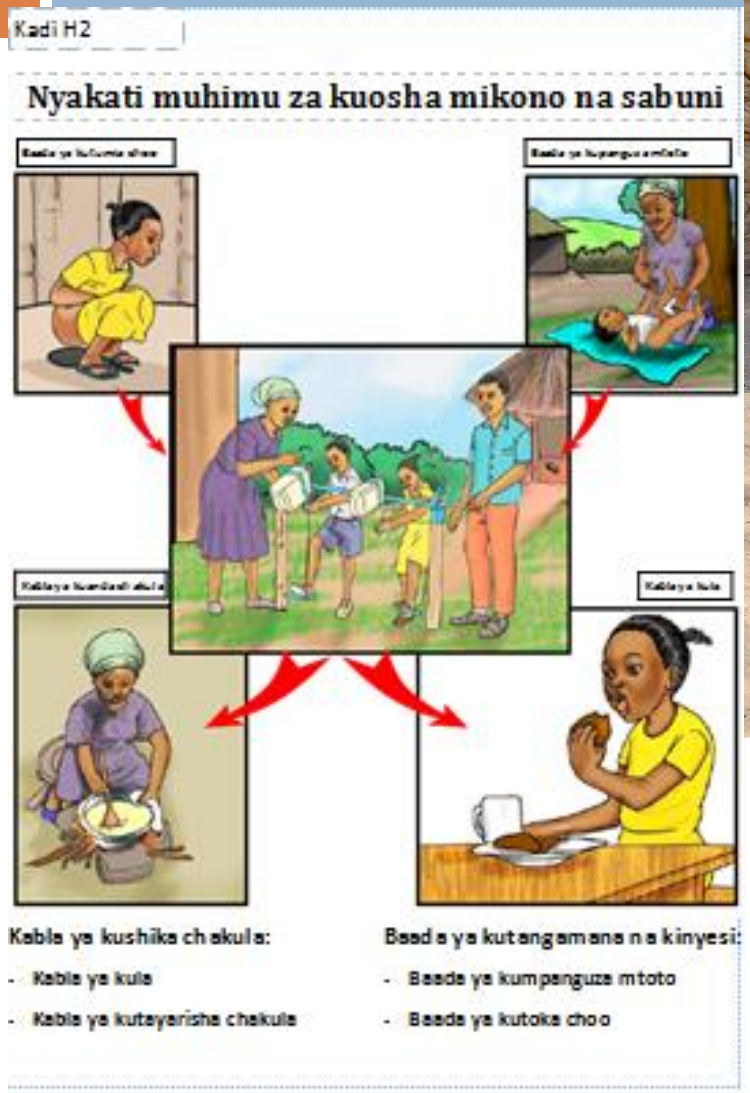
1. **Theory:**
   - Health Belief Model
   - Theory of Planned Behavior
   - Social Cognitive Theory

2. **Themes**

   E.g. Nurture, aspiration, shame and disgust, etc.

3. **Formative research**
   - Key-informant interviews, in-depth interviews, focus group discussions and semi-structured observations

Some of the Visual Aids



Successes and Challenges

- Challenges of the BCC activities in wash benefits study
  - Adequate supervision of IPAAs
  - Motivation of the IPAAs
  - Managing expectations
  - IPAAs attrition
  - Expensive program
- Successes of the BCC activities
  - Contributed to increase in uptake of interventions
  - Provided critical linkage to communities
  - Contributed to existing knowledge base in communities
  - Provision of critical information to project (hardware, respondent welfare…)

SHARE's Systematic Review of Menstrual Hygiene Management

OPEN ACCESS Freely available online

PLOS ONE

A Systematic Review of the Health and Social Effects of Menstrual Hygiene Management

Colin Sumpter*, Belen Torondel

Department of Disease Control, London School of Hygiene and Tropical Medicine, London, United Kingdom

Abstract

Background: Differing approaches to menstrual hygiene management (MHM) have been associated with a wide range of health and psycho-social outcomes in lower income settings. This paper systematically collates, summarizes and critically appraises the available evidence.

Methods: Following the PRISMA guidelines a structured search strategy was used to identify articles investigating the effects of MHM on health and psycho-social outcomes. The search was conducted in May 2012 and had no date limit. Data was extracted and quality of methodology was independently assessed by two researchers. Where no measure of effect was provided, but sufficient data were available to calculate one, this was undertaken. Meta-analysis was conducted where sufficient data were available.

Results: 14 articles were identified which looked at health outcomes, primarily reproductive tract infections (RTI). 11 articles were identified investigating associations between MHM, social restrictions and school attendance. MHM was found to be associated with RTI in 7 papers. Methodologies however varied greatly and overall quality was low. Meta-analysis of a subset of studies found no association between confirmed bacterial vaginosis and MHM (OR 1.07, 95% CI: 0.52–2.24). No other substantial associations with health outcomes were found. Although there was good evidence that educational interventions can improve MHM practices and reduce social restrictions there was no quantitative evidence that improvements in management methods reduce school absenteeism.

Conclusion: The management of menstruation presents significant challenges for women in lower income settings; the effect of poor MHM however remains unclear. It is plausible that MHM can affect the reproductive tract but the specific infections, the strength of effect, and the route of transmission, remain unclear. There is a gap in the evidence for high quality randomised intervention studies which combine hardware and software interventions, in particular for better understanding the nuanced effect improving MHM may have on girls' attendance at school.

Citation: Sumpter C, Torondel B (2013) A Systematic Review of the Health and Social Effects of Menstrual Hygiene Management. PLoS ONE 8(4): e62004. doi:10.1371/journal.pone.0062004

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Competing Interests: The authors have declared that no competing interests exist.

* E-mail: colin.sumpter@lshtm.ac.uk

Introduction

Menstruation is a natural and beneficial monthly occurrence in healthy adolescent girls and pre-menopausal adult women. It concerns women and men alike as it is among the key determinants of human reproduction and parenthood. The age of menarche varies by geographical region, race, ethnicity and other characteristics but 'normally' occurs in low income settings between the ages of 8 and 16 with a median of around 13. [1,2] The median age of menopause is estimated at around 50 years. [3] By using these figures we can calculate that between menarche and menopause a woman in a low income country may expect to menstruate for around 1400 days in her lifetime.

Globally women and girls have developed their own personal strategies to cope with menstruation. These vary greatly from country to country, and within countries, dependent on an individual's personal preferences, available resources, economic status, local traditions and cultural beliefs and knowledge or education. Due to these restrictions women often manage menstruation with methods that could be unhygienic or inconvenient, particularly in poorer settings.

Estimates of the prevalence of methods of management vary greatly across contexts but studies report widespread use of unsanitary absorbents, and inadequate washing and drying of reused absorbents across Africa, South East Asia and the Middle East. Studies in Africa have found use of sanitary pads as low as 18% amongst Tanzanian women with the remainder using cloth or toilet paper. [4] Studies of Nigerian schoolgirls have found between 31% and 56% using toilet tissue or cloth to absorb their menstrual blood as oppose to menstrual pads. [5,6] A study of women in Gambia found that only around a third regularly used sanitary pads. [7] Studies in India have found between 43% and 88% of girls washing and reusing cotton cloth rather than using disposable pads. [8,9] It has been found that cleaning of cloths is often done without soap or with unclean water and drying may be done indoors rather than in sunlight or open air due to social

Belen Torondel, LSHTM

30th April 2015

Menstrual hygiene management

- Topic neglected in different “agendas”
- Appropriate menstrual hygiene management is essential for:

  - HEALTHY
  - PRODUCTIVE
  - DIGNIFIED

lives for women and girls

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Menstrual Hygiene Management

Different aspects of Menstrual hygiene:

Hardware:

- Water and Soap access
- Toilet and disposal material access
- Menstrual Absorbent Access
- Drying space

Software:

- Knowledge
- Privacy
- Dignity
- Convenience
- Security

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Hardware:

Software:

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Systematic Review 1)Rationale

- Neglected issue in Water, Hygiene and Sanitation field
- There is an evidence gap and limited awareness of potential associations with…
  - Health outcomes
    e.g. Urinary and reproductive Infections
  - Social outcomes
    e.g. School attendance
- Limited evidence for existing interventions

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Systematic Review 2)Methodology

- Systematic search for research papers Search terms to combine: menstruation, social outcomes, health outcomes and management strategies
- Inclusion criteria:

-Available in public domain (web-based search)

-No time limit

-English language

-Published, peer reviewed

-Menstruating women from low or middle income setting.

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Results: 3)Health Impact

- (14 articles)- Presented evidence for the impact of menstrual hygiene management on Health outcomes (mainly RTI).
  (13 articles- Observational studies)

- Plausible association: **good MH and reduction of RTI** (7 papers).
- Unclear about:
  - -Specific infections (BV?, infertility?, UTI?)
  - -Strength of effect
  - -Route of transmission

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Results 4)Social Impact

- Evidence for the impact of menstrual hygiene management on Social / educational outcomes (11 articles):

-Little evidence that improvements on MH can reduce social restrictions including school absenteeism.

-Good evidence that educational interventions can improve MH practices and reduce social restrictions other than attendance to school.

Systematic Review 3)Output

Gap of evidence base for randomised intervention studies which combine both hardware and software interventions for both health and social outcomes.

THANK YOU!!!

Belen.torondel@lshtm.ac.uk

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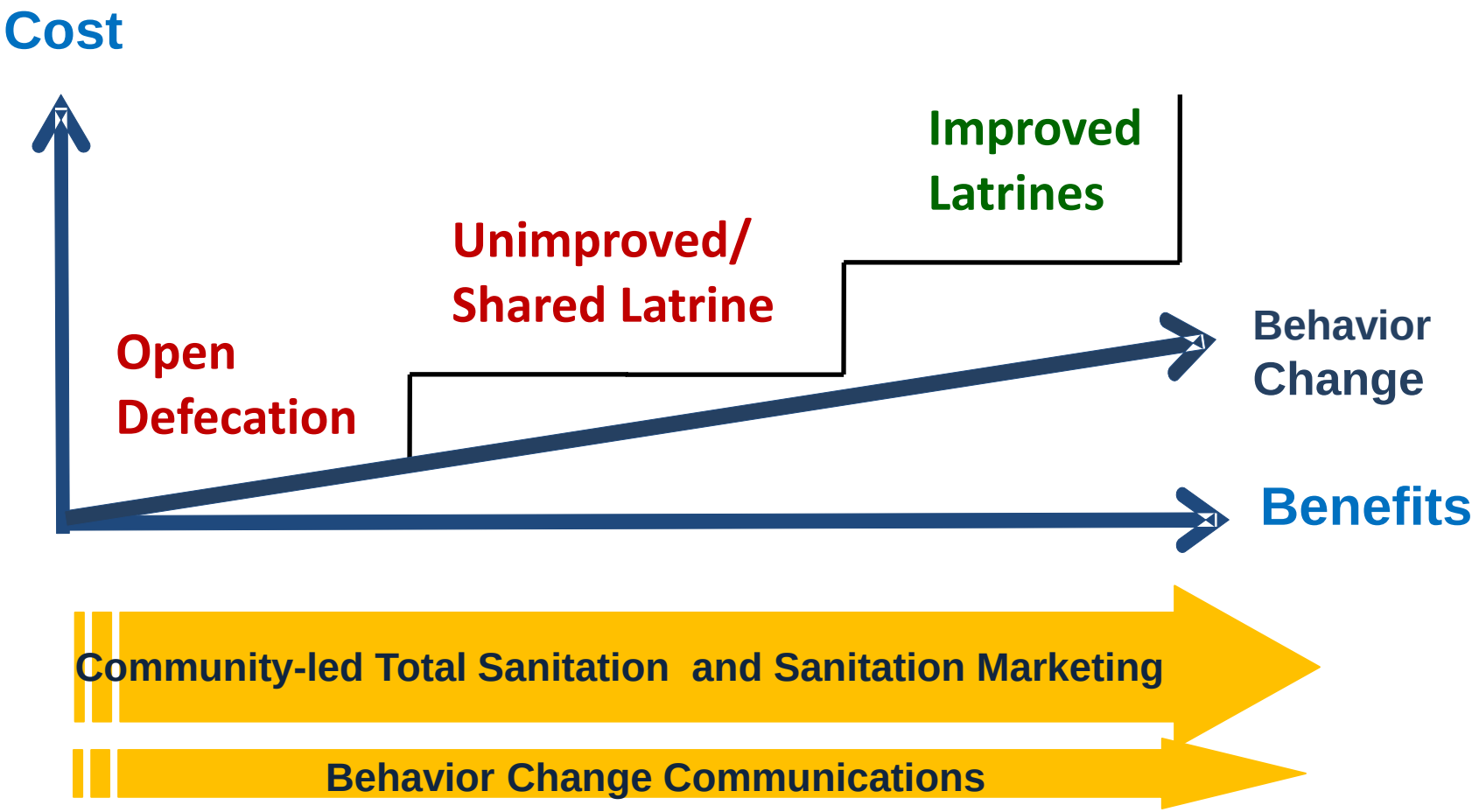
Social Marketing for Improved Sanitation

Lillian Mbeki

OUTLINE

- Brief Background on the Sanitation Marketing strategy
- National Improved sanitation Communications Campaign overview
- Campaign progress and learnings

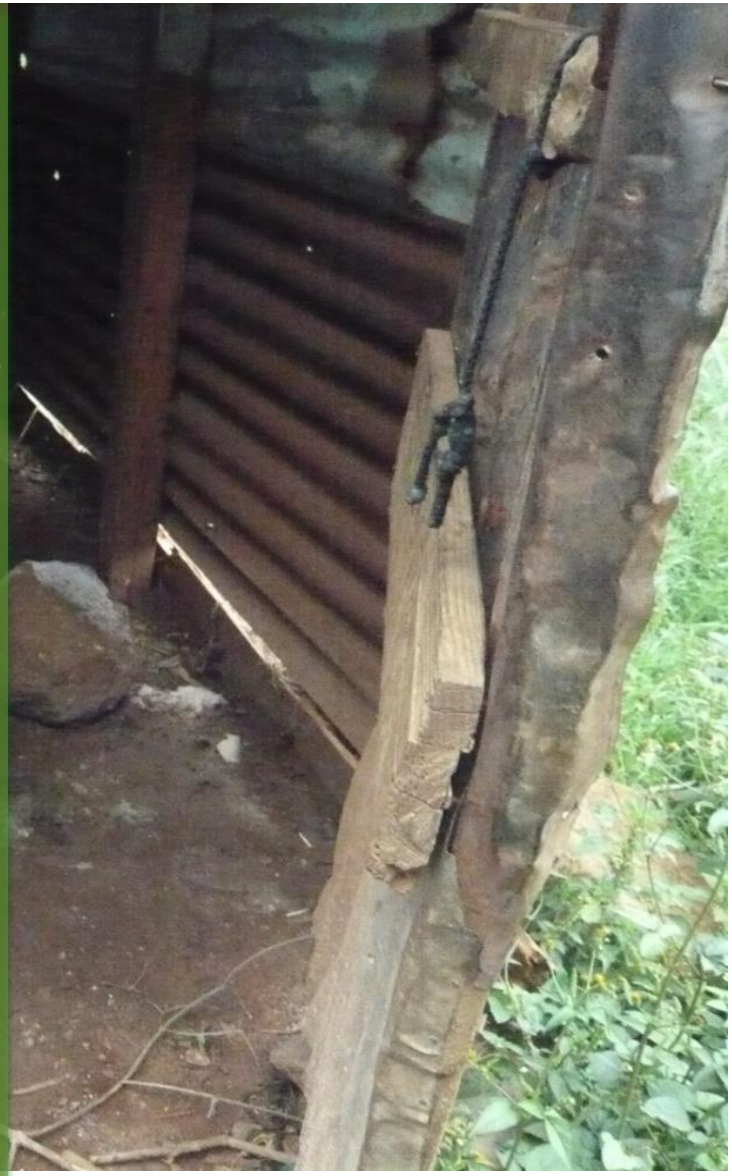
The National MoH Strategy



CLTS gets people to build and use basic latrines

Why are communities reverting back to OD? And what don't they like about their latrines?

- Lack of usable latrines: pit latrines collapse, break, fill up
- Cost of latrine construction and repair is too high
- Fear that children will fall in latrine
- Difficult to clean mud and wood floors
- Bad smells
- Leaky roof/no roof/no proper door
- For those with mud and wood floors: Fear that latrine will collapse due to rotting wood or wet floor
- Flies
- Lack of privacy- Can be seen from outside



Getting Private sector Engaged

- 2 large manufacturers designed and manufactured plastic slabs- SilAfrica and Kentainers
- Invested upward of USD 300,000 each, upfront
- Three products going to market; Large Collar, Small Slab and Medium Slab
- 2 Micro-Finance Institutions have linked with private sector to provide credit financing to individuals and groups for latrine improvement

Collar Small Slab; 60 X 80 cm Medium Slab; 70 X 90

THE IMPROVED SANITATION STRATEGY

My Toilet,
My Dignity

Insights…

- Society believes the cleanliness of a home as a reflection of the owner
- Latrine improvements will be financed from savings, selling produce, cash from work
- Households do not have bank accounts; prefer to save with Chamas
- They are hesitant to take loans for fear of defaulting

Who?

Who are we focusing on?

- Belong to the bottom 40% of Kenya's earners.
- Own a basic latrine and are part of the 86% of Kenyan House holds with access
- Just 1% of income spent on improving toilet / latrine in last 12 months
- They always put their best foot forward

What do we want Peter & Pauline to do?

- ✓Make small small improvements to their latrine to make it:
- ✓Sealable
- ✓Cleanable
- ✓And provide maximum privacy

Why?

- So that they sustain their new behaviour and an ODF community
- To enjoy the maximum health benefits of using a latrine

How?

County Engagements and Launches

Below The Line

Roadshows

Small Group Sessions

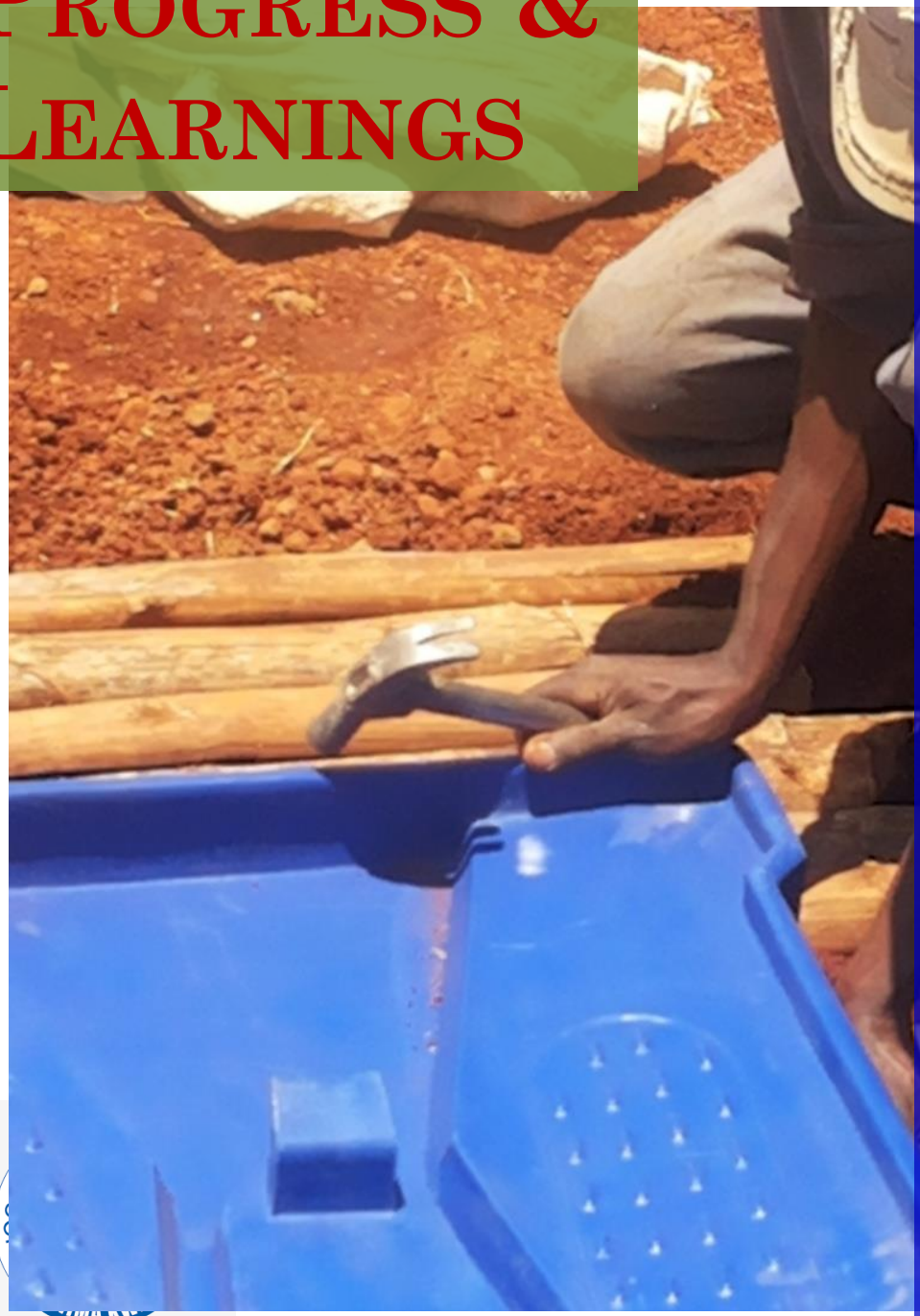
H/H visits

Above the Line

- Nam Lolwe
- Kass FM
- Kameme FM

CHOO CHANGU
RESHIMA KWANGU

Progress & Learnings



- 4 sub-counties in Nakuru and Kisumu covered. Starting phase 2 in 8 sub-counties in Nyeri and Busia
- Need for credit to buy plastic slabs- Equity and ECLOF now engaged
- Community members have improvised lids for their latrines.
- Follow up and support is necessary to lay emphasis on the need to adopt the positive behavior
- Reaching women through women groups meetings as many are showing interests to improve their toilets
- Opportunity for sanitation advocacy with county governments emotional burden that come with poor sanitation
- Process of learning by CHVs and PHOs to use the ETL technique

Ahsante Sana

Disparities in water, sanitation and hygiene-related exposure and outcomes in peri-urban communities in Kisumu

Presented by
Jane Mumma

UF UNIVERSITY of FLORIDA

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Background

•Economic disparity between different regions are evident in this country, and affect those living in the regions accordingly

•Two broad trends are impacting global and national sector policy and priorities.
- Firstly, fiscal revenue is shrinking across much of the world, resulting in reducing levels of overseas development assistance (ODA) and increasing pressures on developing country government budgets
-Secondly, there is increasing recognition that global efforts to reduce poverty have underperformed in relation to equity with increasing disparities in access to services in many areas between the rich and the poor

Background

Studies done on inequities in MDG progress to improve access to water and sanitation across wealth quintiles WHO (2010), and role of international aid flows, OECD-DAC (2008)] and national policy and planning WHO (2010) have have been explored, however, these works suggest that certain groups may be marginalized by current strategies and investments through poor targeting.

Organization for Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC)

Diarrhea, is one of the leading contributor to child morbidity and mortality in developing countries

Risk factors for diarrhea include, poor water, sanitation & hygiene; nutritional vulnerability and inadequate treatment. All these are associated with socio economic factors and disparities

While we are getting a better understanding of the etiology of diarrhea disease, there is still a limited understanding of how socio-economic process influence exposure and illness from various pathogens.

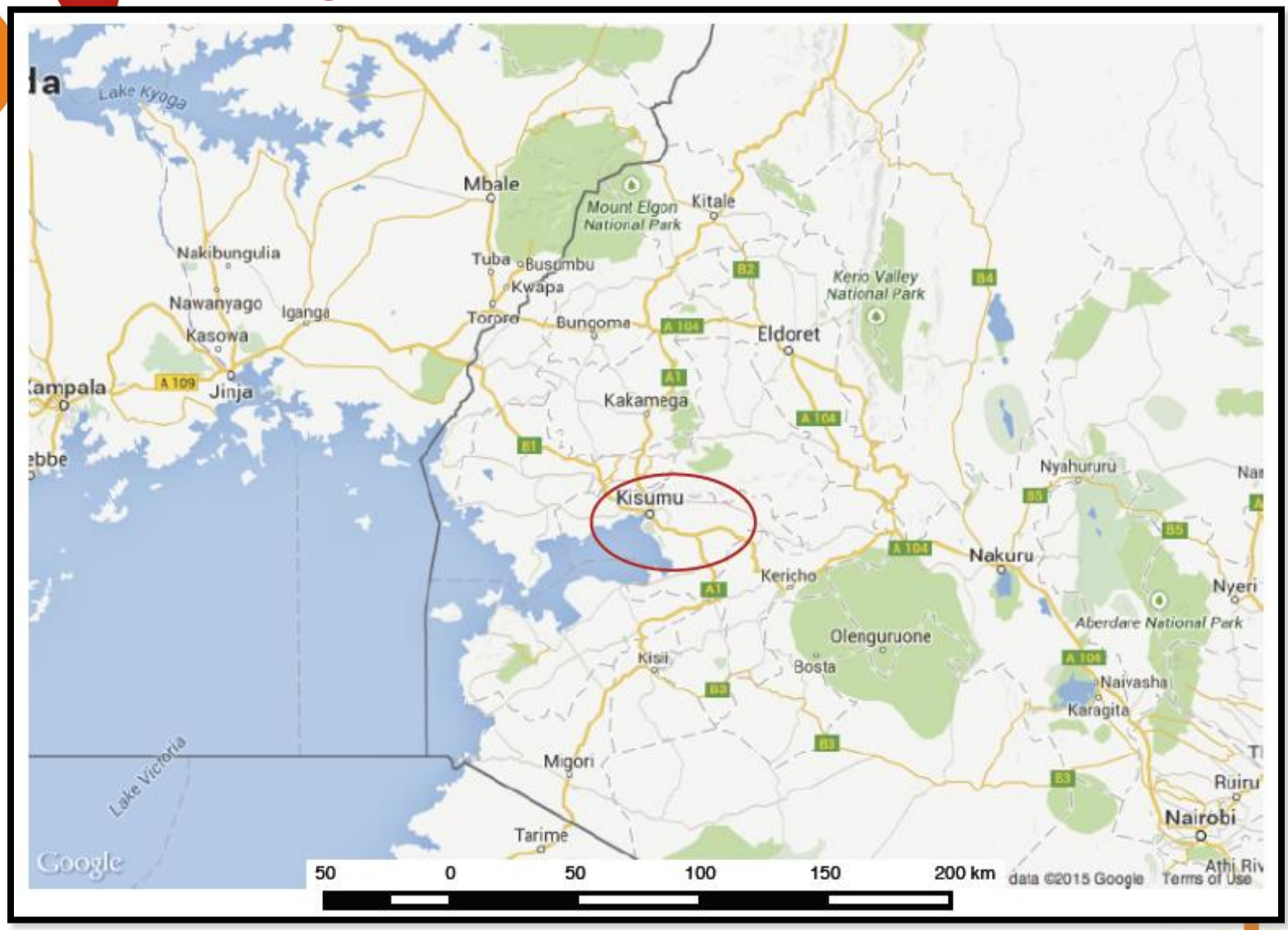
Aims of the study

Aim 1: Describe the social, economic and environmental factors that contribute to water, sanitation and hygiene related behavior and conditions at the community and household level

Aim 2: Estimate and describe the relationship between conditions and behaviors at the household and community level, and contamination of key exposure points

***Aim 3*:** Describe exposure pathways from measured household and community variables to detected pathogens in children's faeces via measured contamination of exposure points

Study Area


Lake Kyoga
Mbale
Mount Elgon National Park
Kitale
Nakibungulia
Tuba
Busumbu
Kwapa
Nawanyago
Iganga
Tororo
Bungoma
Kasowa
Kampala
A 109
Jinja
Kakamega
Eldoret
Kerio Valley National Park
Kisumu
Nyahururu
Nakuru
Kericho
Nyeri
Aberdare National Park
Olenguruone
Kisii
Bosta
Naivasha
Karagita
Migori
Lake Victoria
Tarime
Ruiru
Nairobi
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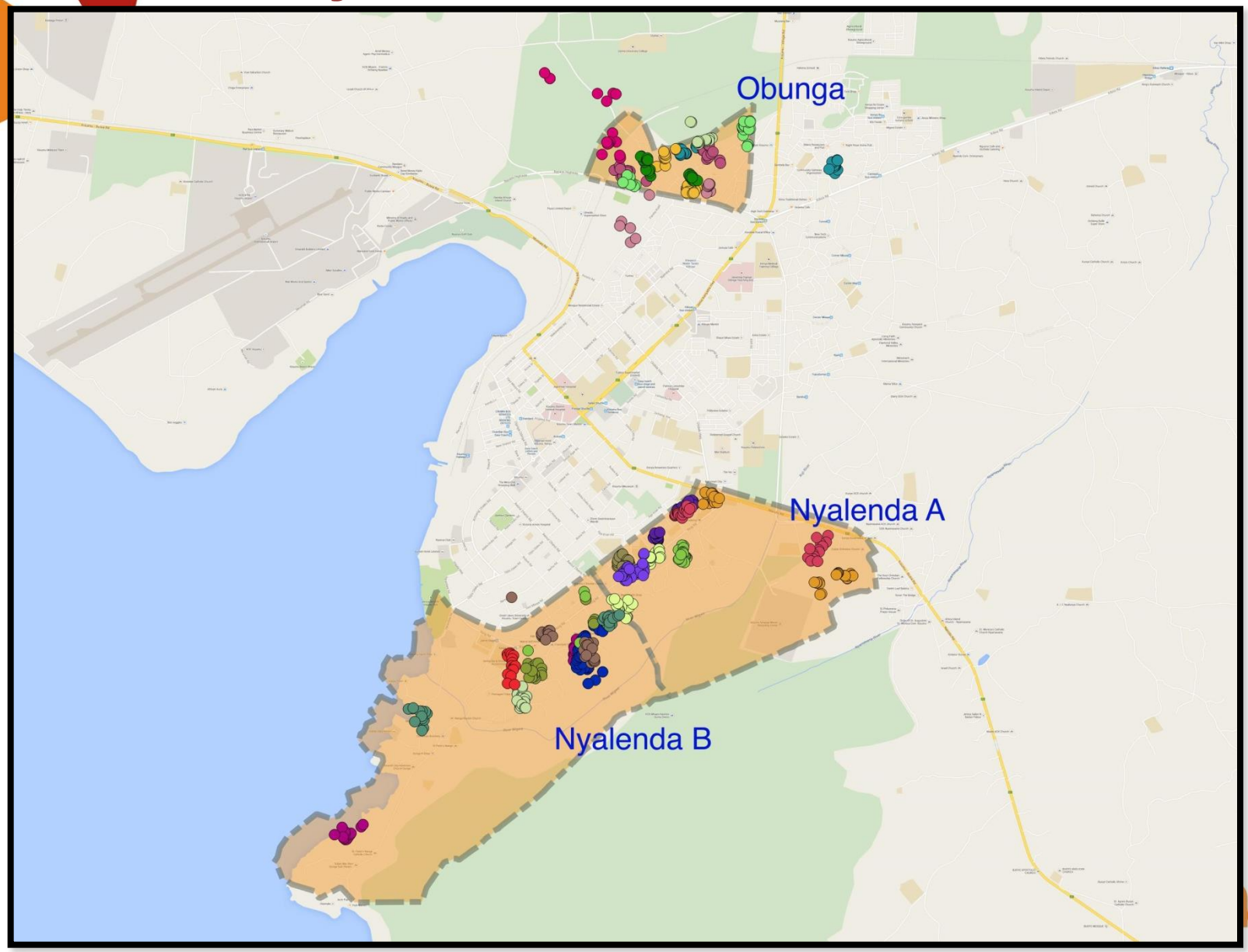
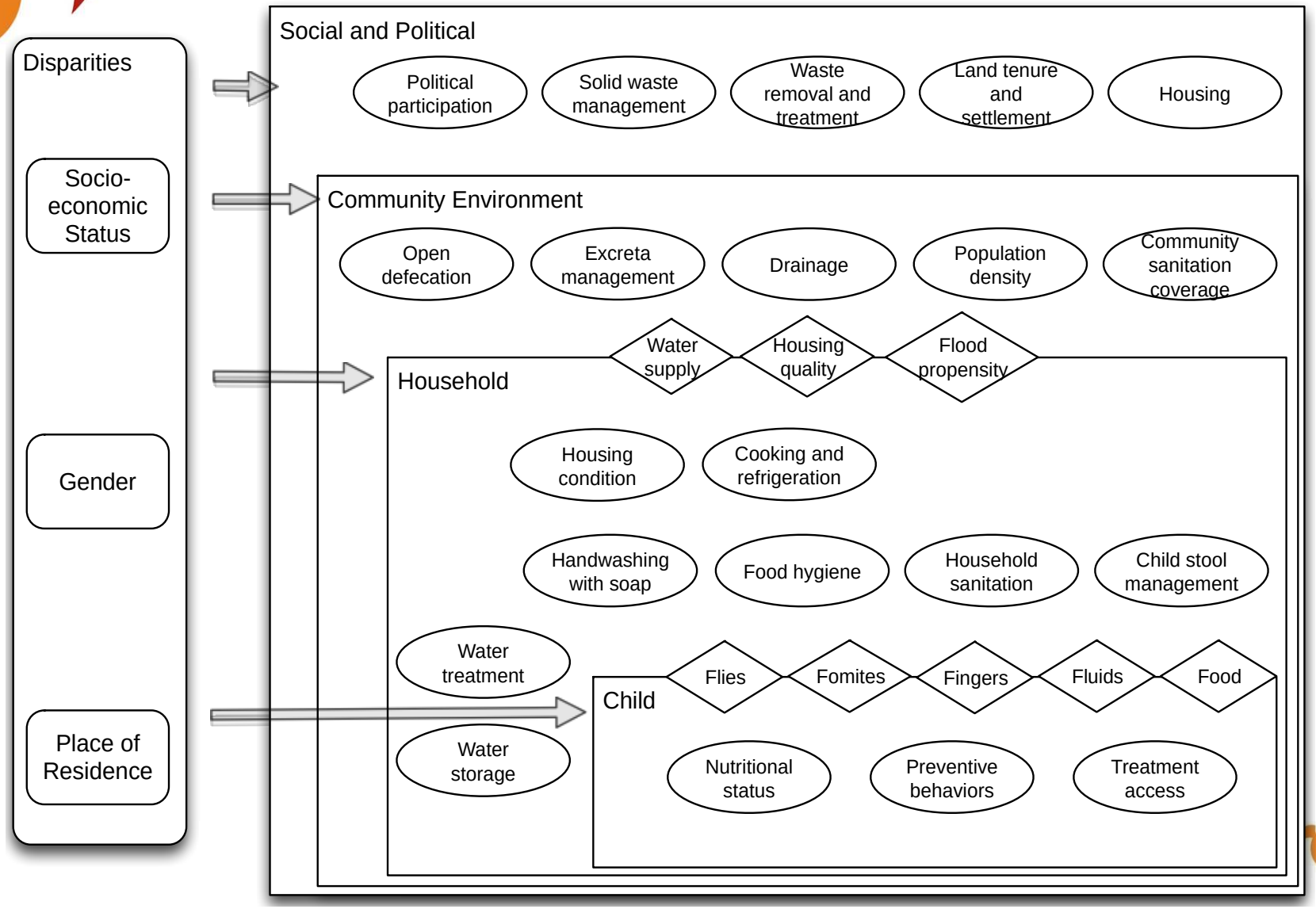
Study Area



Conceptual framework for the social-ecology of sanitation-related health and disparities



Study Sites

The city of Kisumu has a population of approximately 500,000 inhabitants (2009 Census).

It is surrounded by a series of **peri-urban** areas sometimes referred to as the slum belt.

These communities have grown over time in response to the lack of affordable housing in the city itself.

According to Kenya Slum Update Programme, UN Human Settlements Programme (2005) Situational Analysis of Informal Settlements in Kisumu, up to 60% of the city's population reside in these communities

J Mumma[3] O Cumming[1], R Rheingans[2], and J Anderson[2]

[1] Faculty of Infectious Disease Control, London School of Hygiene and Tropical Medicine
[2] Emerging Pathogens Institute, University of Florida
[3]Great Lakes University Kisumu
[4] Kenya Medical Research Institute

UKaid from the Department for International Development

This material has been funded by UK aid from the Department for International Development (DFID). However, the views expressed do not necessarily reflect the Department's official policies.

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Capturing socio-ecological complexities in peri-urban water and sanitation

Doctoral Research on the Relationships Between Sanitation and Gender Dynamics, Animal Contact, and Fly Density

John D Anderson IV
j5anders@epi.ufl.edu

UF UNIVERSITY of FLORIDA

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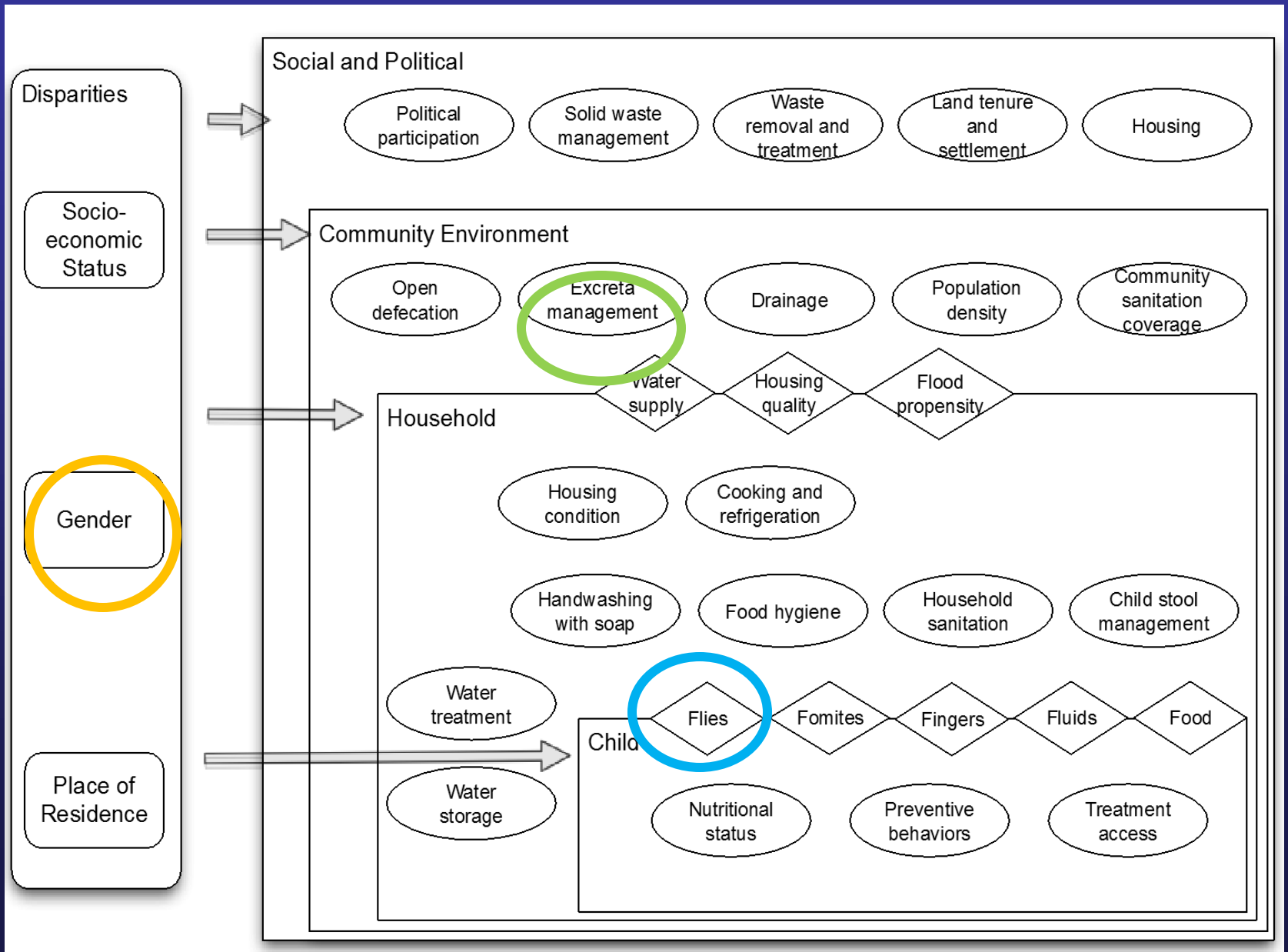
Sanitation and Hygiene Applied Research for Equity

Background


Disparities
Socio-economic Status
Gender
Place of Residence
Social and Political
Political participation
Solid waste management
Waste removal and treatment
Land tenure and settlement
Housing
Community Environment
Open defecation
Excreta management
Drainage
Population density
Community sanitation coverage
Water supply
Housing quality
Flood propensity
Household
Housing condition
Cooking and refrigeration
Handwashing with soap
Food hygiene
Household sanitation
Child stool management
Water treatment
Water storage
Child
Flies
Fomites
Fingers
Fluids
Food
Nutritional status
Preventive behaviors
Treatment access

Gender and WASH

- Women are primarily responsible for HH WASH requirements
- Gender and social disparities are often neglected in WASH research and action
- Gender of the HH head influences HH WASH conditions and behaviors
- Economic and social conditions (support, network, empowerment) are different in male and female headed HH
- Insecurity and threat experienced by women when meeting WASH needs leading to high stress and other health issues

Aims and Methods

Aims:

1. To determine the influence of gender, household economic status and social support on WASH conditions and behaviors
2. To examine the relationship between social support mechanisms for mothers and their resilience to cope with child's diarrheal outbreaks.
3. To determine the association between WASH conditions and psycho-social stress amongst women

Data sources include:

1. Five focus group discussions with mothers of children six-36 months
2. Twenty semi-structured interviews with mothers of children six-36 months
3. 800 household survey data related to gender and social characteristics, wealth, WASH conditions and behaviors

Results

- 32% of respondents from female headed households
- Greater percentage of female headed HH are poor
- Fewer female headed HH had access to compound toilet and improved water source
- 40% women reported to feel unsafe when accessing their compound toilets at night
- 21% felt unsafe while fetching water at night
- 12% of women with compound toilets, have been attacked or assaulted at night

	Gender of HH head (%)	
Wealth Tercile	Male	Female
Poor	30	42
Middle	34	31
Rich	36	27
N	**523**	**242**
Access to latrine in compound	66	29
Access to improved water source	68	32
Total		**765**

"No you cannot go there (to the toilet), as it is by the roadside and very dark at night. Someone can hide there"
"I hold till morning"
(Respondents from semi-structured interviews)

Animals and Sanitation

- Up to 75% of emerging pathogens may be of animal origin
- Unequal access to water and sanitation can facilitate the spread of enteric zoonotic disease
- Additional drivers include:
  - population demographics: e.g. malnourished and immunocompromised
  - need for animal protein in diets
  - concentrated animal husbandry practices and sites
  - the density of domestic animals
  - and the trade and sale of animals and animal products

Animals and Sanitation: Aims and Methods

Aim 1: Analyze variations in species of animal contact, gender/age of household member with contact, and purpose of contact

Aim 2: Determine the prevalence of zoonotic enteric pathogens in animal waste from compounds and in public spaces within these same communities

- **Data sources** include:
  - 100 samples of animal waste from the environment
  - Samples of animal waste from inside 473 compounds
  - Molecular analysis of all samples for enteric pathogen profile

Animal Contact in Kisumu

- 32% of households reported animal ownership
- 72% of compounds had visible animals at the time of sampling
- 71% of compounds had fresh animal stool on the premise at sampling

Household Member With Most Contact	Livestock % (N=252)	Poultry % (N=252)	Companion % (N=252)
Adult Female	13.49	50.00	26.19
Adult Male	20.24	5.16	5.16
Child/Children	1.59	1.19	8.73
Other	11.51	11.11	6.35

Collective Action and Filth Flies

- Houseflies, blowflies and flesh flies are known to carry diarrheal diseases
- Little is know about the dynamics between informal settlements, filth fly populations and child exposure to diarrheal disease.
- Improved latrines have been shown to reduce filth fly populations and incidence of shigellosis
- Collective action has shown promise in producing sanitation solutions in resource-poor settings with support from institutions

Aims and Methods

Aim 1. Determine whether geographic, environmental and social conditions drive filth fly density and transmission of enteric pathogens.

Aim 2. Determine key indicators for collective action around improvements in WASH conditions related to filth fly population density in peri-urban Kisumu.

Aim 3. Identify barriers community members face in developing community-based improvements in WASH conditions.

Data:

- FGDs and Transect walks
- Household surveys
- Samples of flies in 371 compounds
- Molecular analysis of flies enteric pathogen profile

Results

- 55% of respondents reported they were a member of a community group or association
- 13% reported joining others once or more to

	Kanyakwar	Nyalenda A	Nyalenda B
COLLECTIVE ACTION			
Group participation	50%	48%	65%
Unhappy			
Solid waste	41%	40%	30%
Drainage	48%	43%	35%
Individual HH			
Solid waste	87%	87%	89%
Drainage	71%	70%	69%
FLIES			
Fly density	9.2	13.6	10.0

Challenge of Universal Access

- Gender disparities and security
- Close relationship between humans and financially important animals
- Navigating the landscape for co-production and community-based solutions
- Complexities of filth fly vector ecology in peri-urban environments

More insights to come…

- Microbial analyses will help determine which diarrheal disease exposure is coming from animals and flies
- More complex models that incorporate all exposure pathways

Collaborations

KENYA MEDICAL RESEARCH INSTITUTE
KEMRI

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

GREAT LAKES
UNIVERSITY OF KISUMU

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Sanitation and Hygiene Applied Research for Equity

UKaid
from the Department for International Development

This material has been funded by UK aid from the Department for International Development (DFID). However, the views expressed do not necessarily reflect the Department's official policies.

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THANK YOU!

Household Water and Weaning food contamination with Enteric Pathogens in a Peri-Urban Setting

Case Study of Nyalenda A & Nyalenda B and Kanyakwar Slums in Kisumu, Kenya

By

Lukorito L[1], Nelima D[1], Achola K[1], Anderson J[2], Mumma J[1], Cumming O[2], Rheingans R[2]

Introduction

- Diarrhea is still second contributor to child mortality (15%) among children under the age of five years in Kenya.
- Contamination of household water and weaning foods by faecal pathogens has been reported to contribute to diarrhea among this age group.
- Contextual factors in the Peri-urban setting are said to play a part in contamination of household water and weaning foods with faecal pathogens.

Objective

- The study was conducted to determine presence of faecal contamination in household drinking water and weaning foods in the Peri-urban context and establish contamination pathways within households and communities.

Methodology

- A two-stage sampling design was applied a total of where a total of 800 households within Nyalenda and Kanyakwar were surveyed. Data was collected on demographics, socio-economic, environmental and behavioral.
- In addition, household water Samples and weaning foods were collected to test for the presence proxy indicators of fecal contamination in the Lab using Filtration technique. Microbiology was done to grow bacteria using selective media to isolate Enterococcus bacteria with plates being incubated at 37^0 C for 48 hours.

Preliminary RESULTS

Fig 1.1 Water contamination with faecal Pathogens (Overall – Kanyakwar & Nyalenda Sub-Locations)

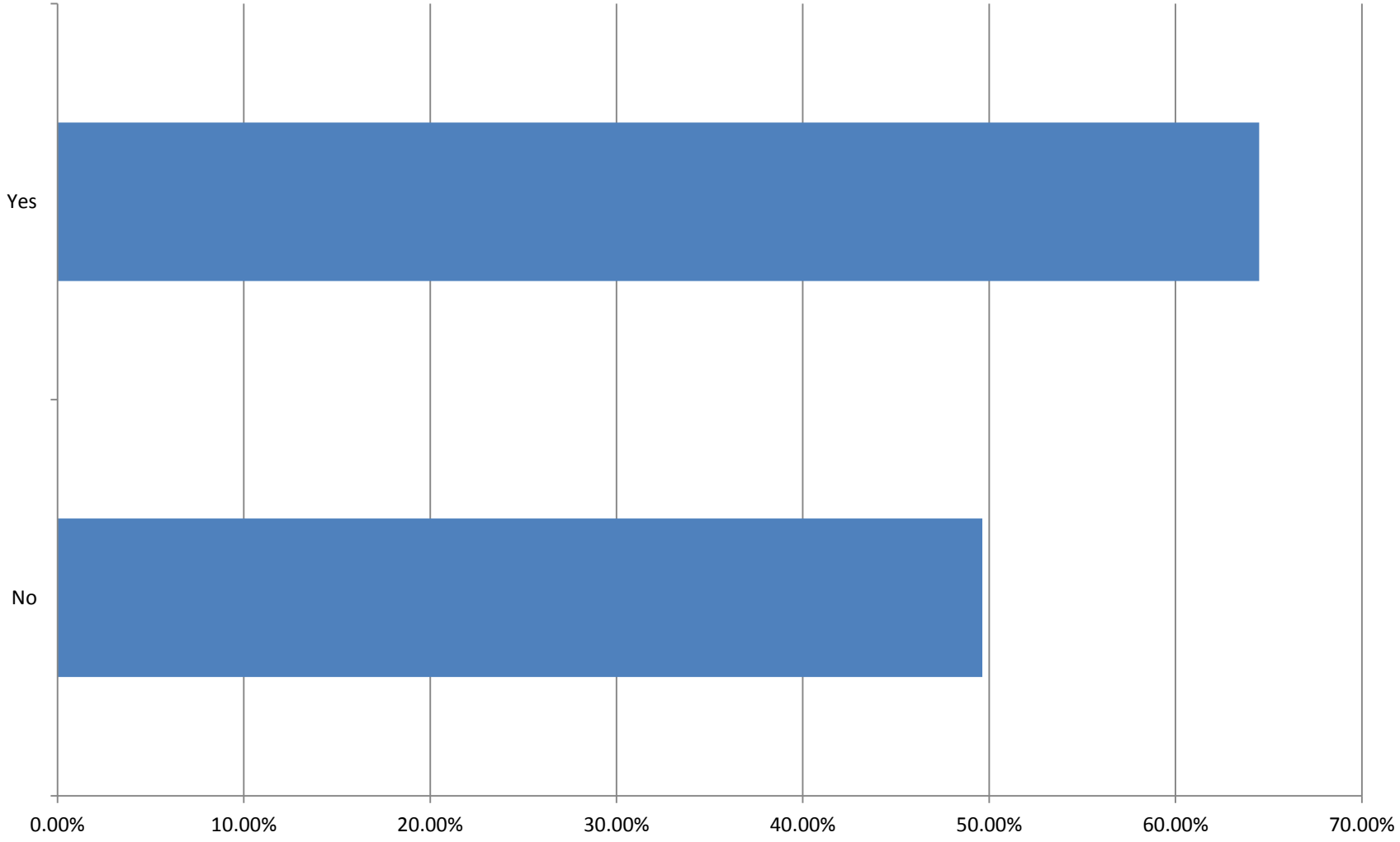


Fig 3.0 Proportion of Households with contaminated water with child by sub-location

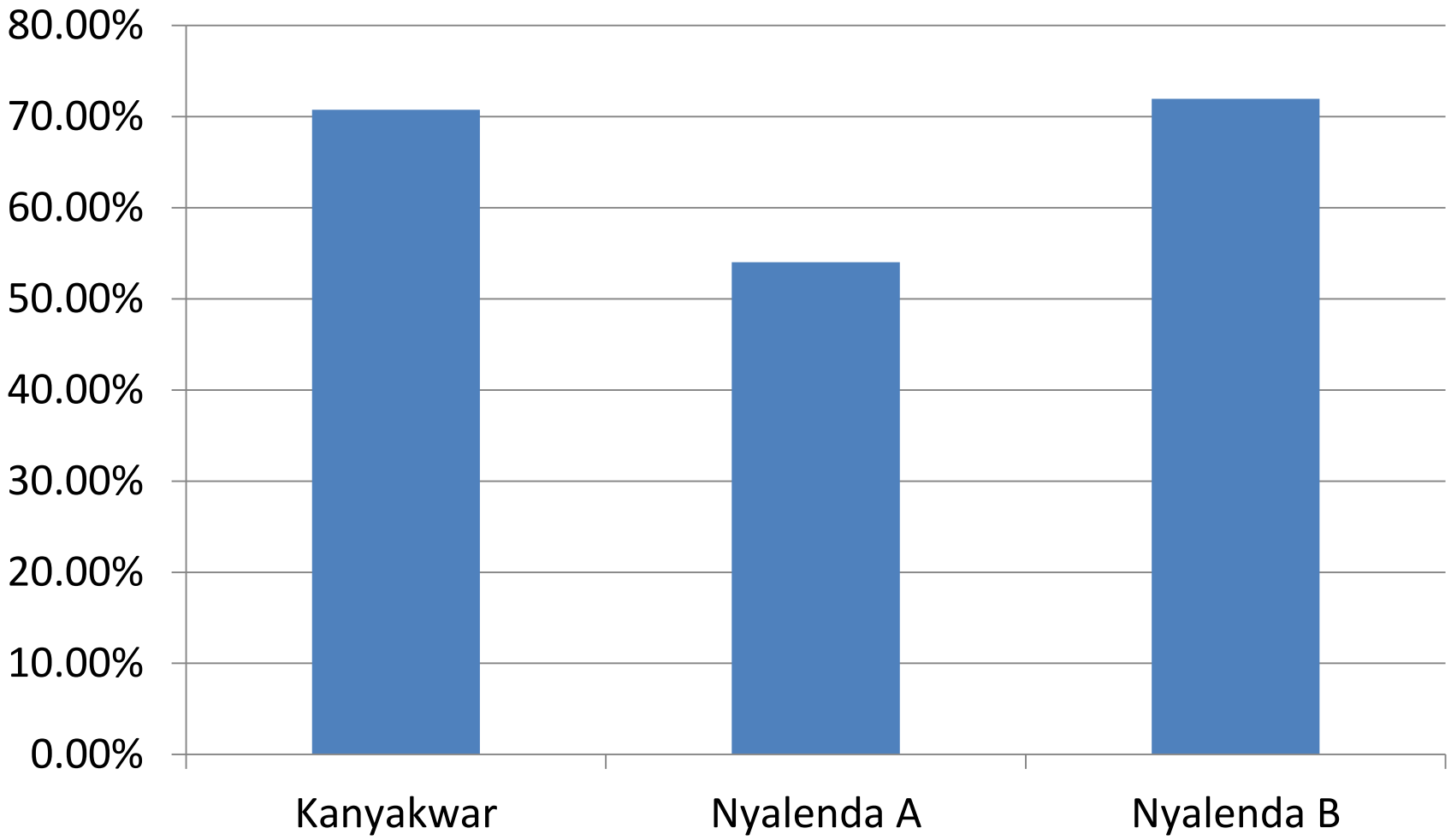


Fig 3.3 Proportion of households` with contaminated weaning food by sub-location

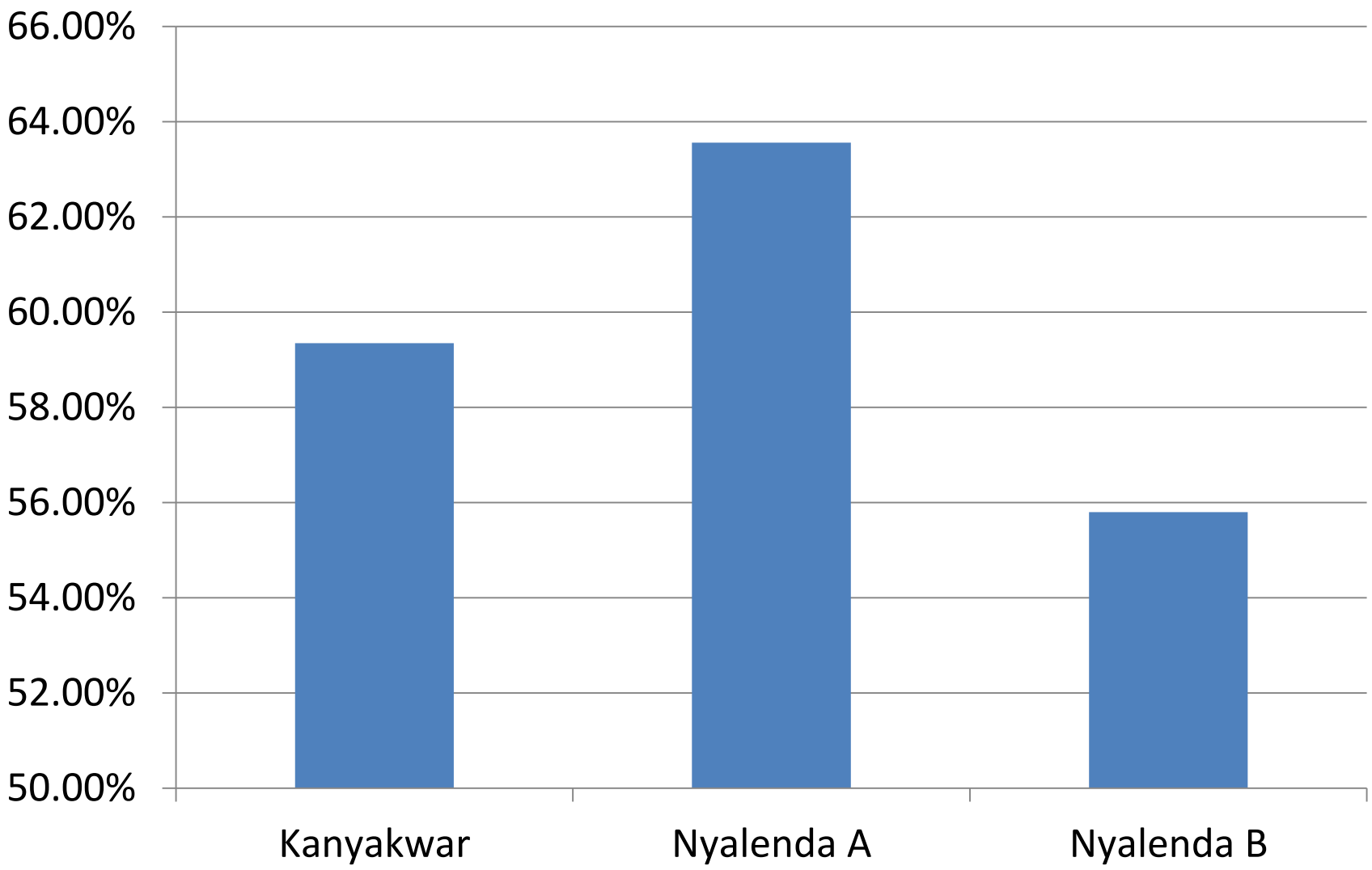


Fig 4.4 Proportion of Weaning Food Contamination by wealth - Overall

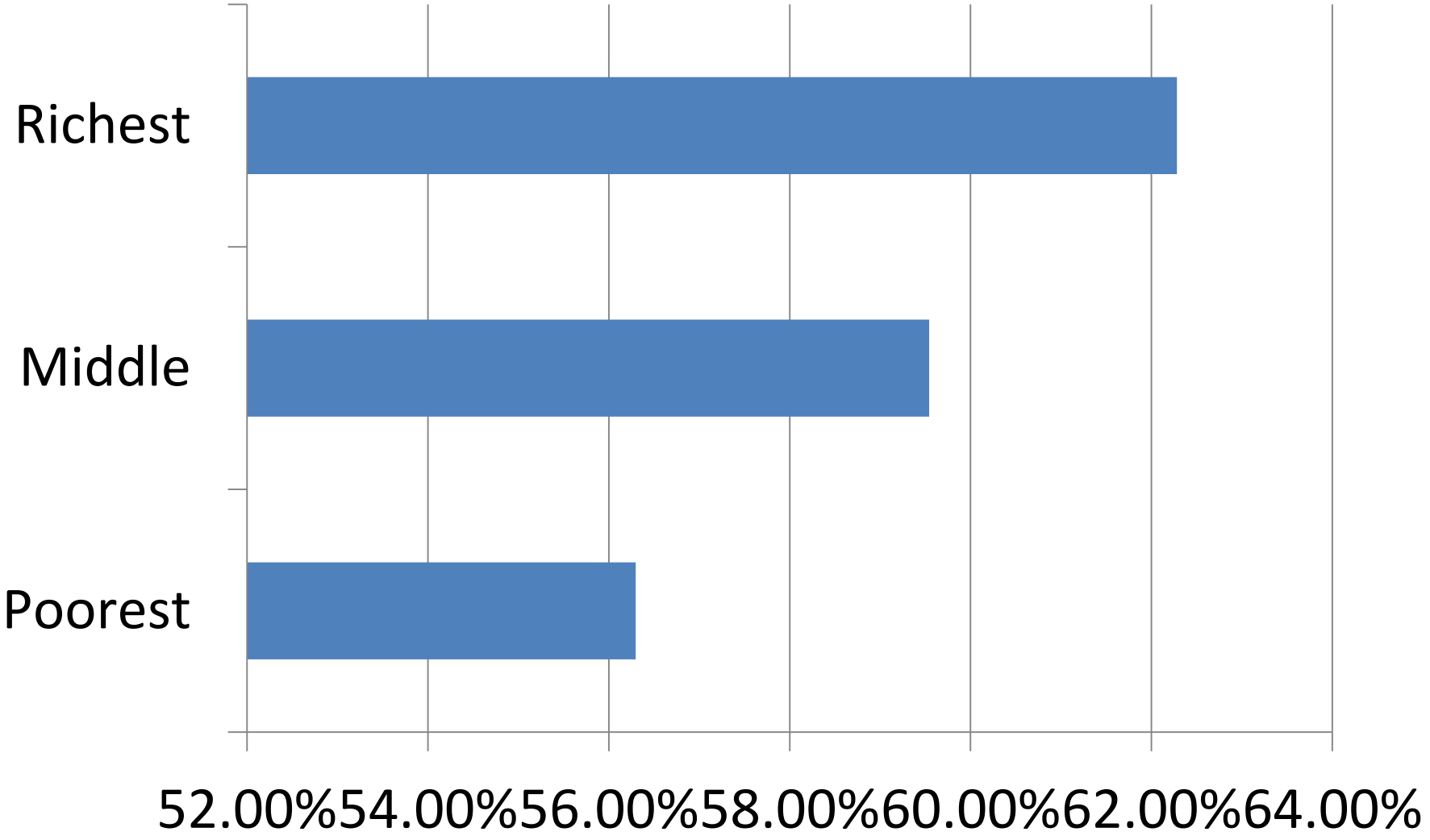


Fig 5.5 Proportion of household with water contamination by wealth – Overall (Household with child)

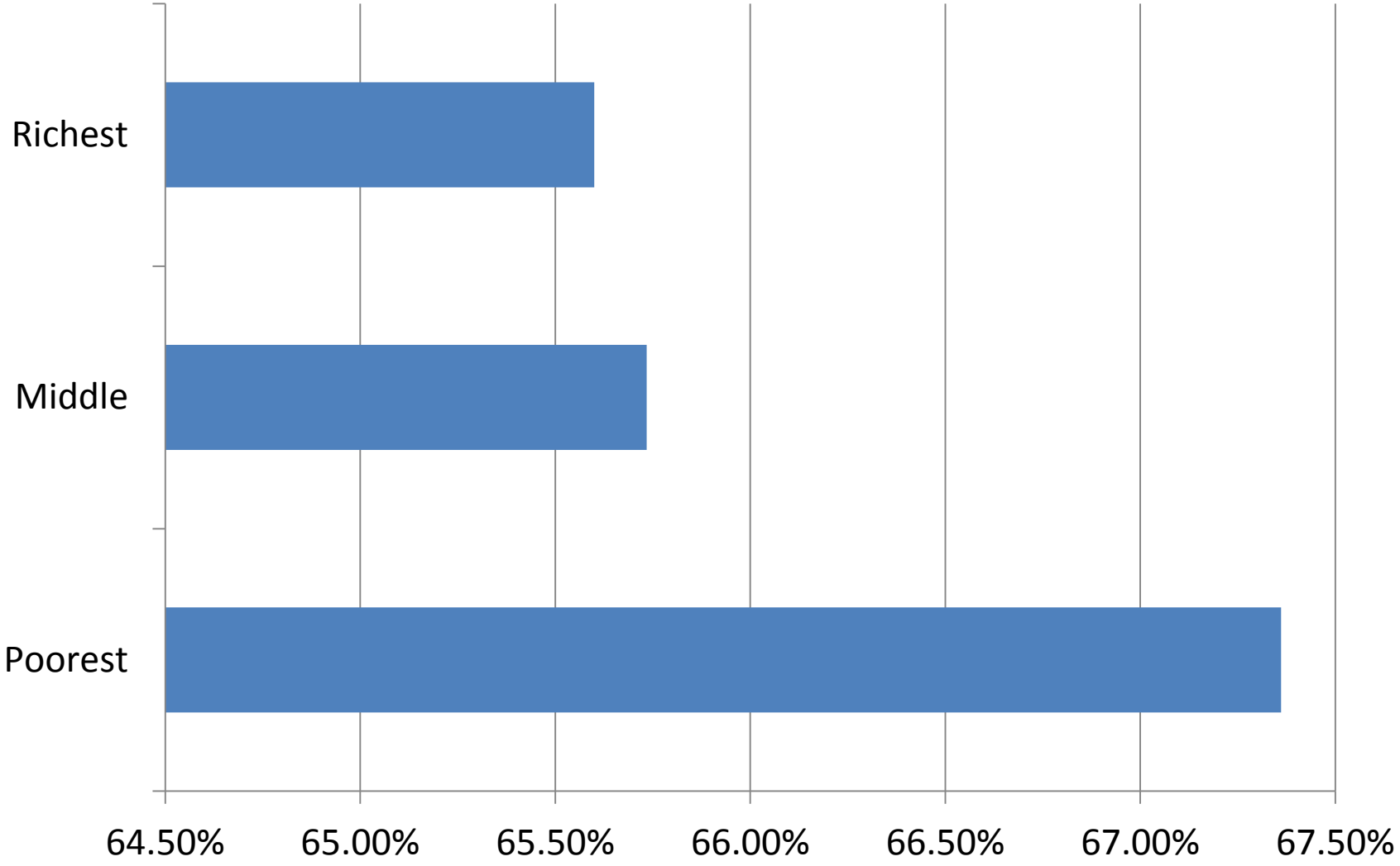


Fig 6.6 Information on overall sources of Household water – All Sub-locations

Source of water	Proportion %
Piped water into dwelling	4.37%
Piped water to compound/plot	21.84%
Public tap/standpipe	71.84%
Tube well or borehole	1.46%
Cart with small tank	0.24%
Surface water	4.37%

Fig 7.7 Different sources of water in Kanyakwar Sub-Location

Source of water	Proportion %
Piped water into dwelling	1.92%
Piped water to compound/plot	21.92%
Public tap/standpipe	74.62%
Tube well or borehole	0.38%
Cart with small tank	1.15%
Surface water	0%

Table 1.0 Different sources of water in Nyalenda A' Sub-location

Source of water	Proportion %
Piped water into dwelling	0%
Piped water to compound/plot	3.45%
Public tap/standpipe	94.64%
Tube well or borehole	1.92%
Cart with small tank	0%
Surface water	0%

Table 2.0 Different water sources in Nyalenda B'

Source of water	Proportion %
Piped water into dwelling	10.79%
Piped water to compound/plot	32.01%
Public tap/standpipe	56.12%
Tube well or borehole	0.72%
Cart with small tank	0.00%
Surface water	0.36%

Conclusions

- Most household water was contaminated with faecal pathogens which was a risk on its own especially to households` which had children of the weaning age and were equally using the water for food preparation and drinking
- Children from wealthy households had a higher chance of ingesting contaminated weaning food and water compared to their counterparts from the slums

Cont..

- The most frequently used source of water is from Public tap/stand pipe, few households have piped water even though some households have water within their compounds meaning there still remains high chances of contamination along the way – from tap to storage especially for households without water inside the premise.

Questions to ponder on???

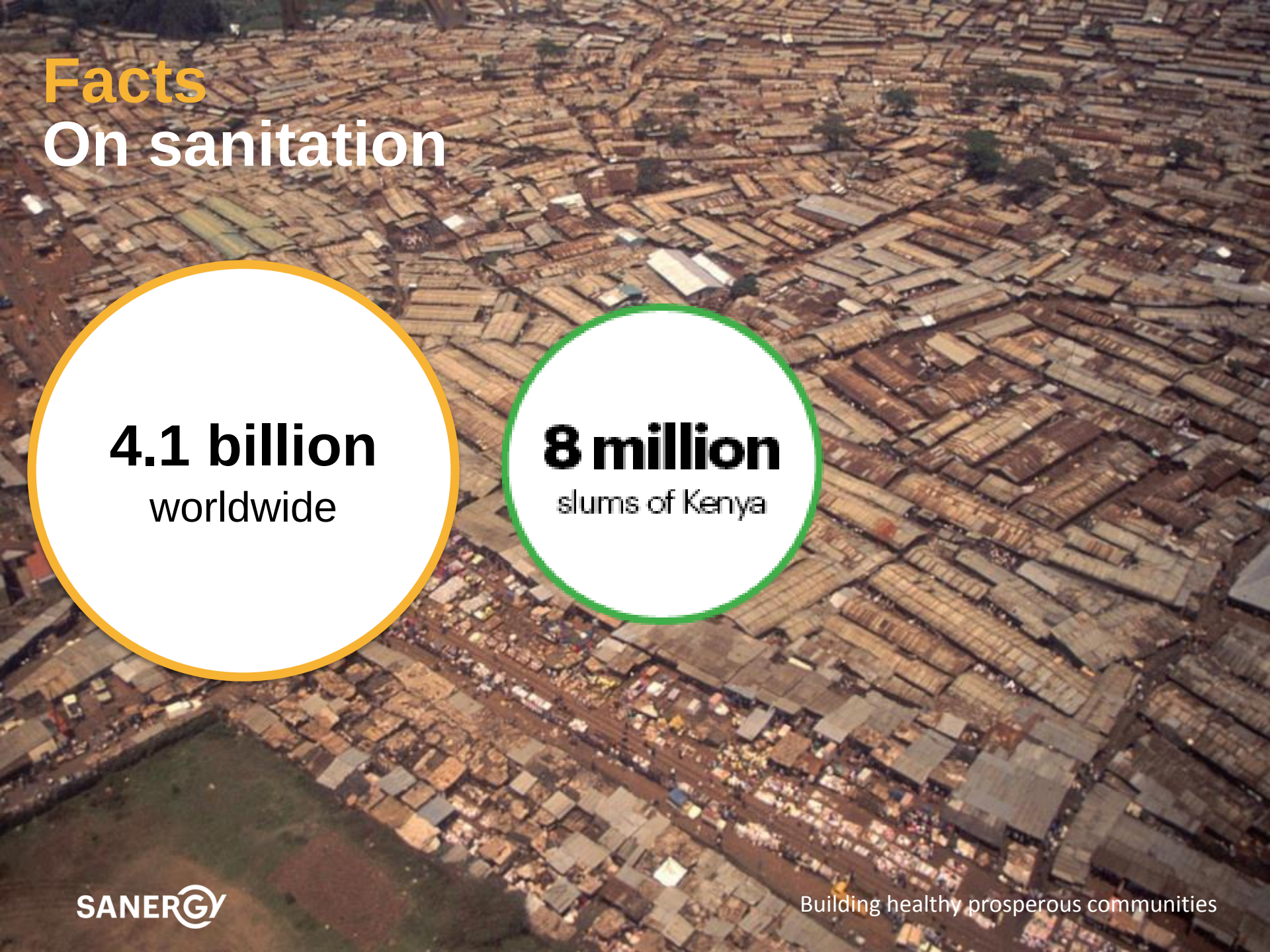
- **Have we achieved the MDG #7?**
- **Where are we?**
- **What happened?**
- **What do we need to do to change the situation?**

ACKNOWLEDGEMENTS

- MANY thanks to
- SHARE Project
- London school of hygiene & Tropical Medicine
- Great Lakes University of Kisumu
- ICDDR - Bangladesh

SANERGY

Building healthy,
prosperous communities


Facts
On sanitation
4.1 billion
worldwide
8 million
slums of Kenya
SANERGY
Building healthy prosperous communities

Existing
Sanitation Options

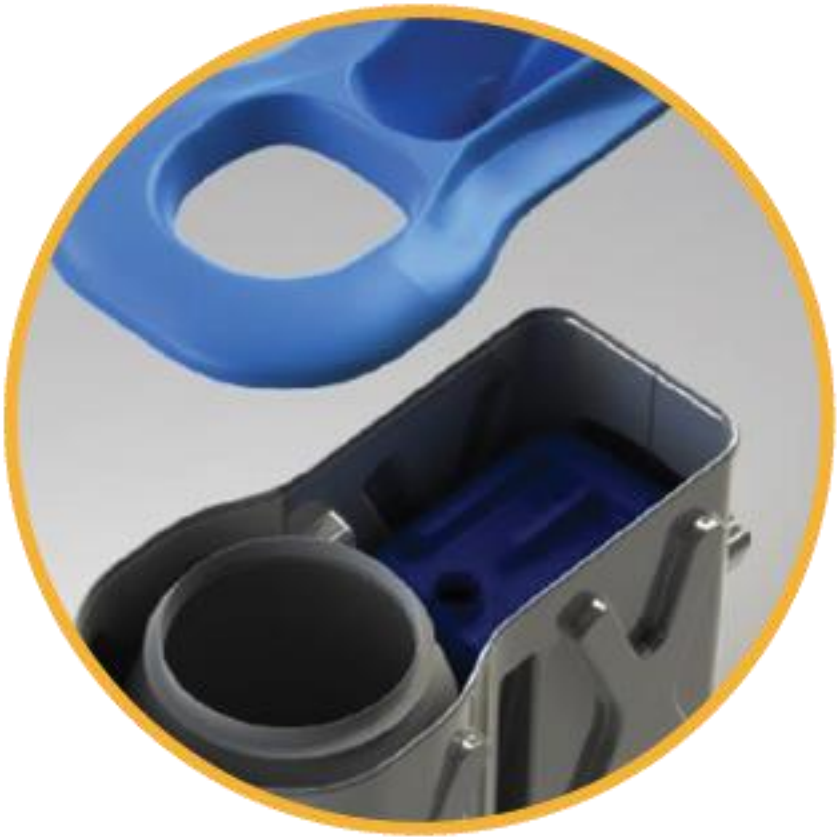
SANERGY

Building healthy prosperous communities

Building an integrated sanitation value chain

At each step, we create jobs and opportunity, while simultaneously addressing serious social, environmental and economic needs.

Fresh Life
Toilets



SANERGY

Building healthy prosperous communities

Business Support
for Fresh Life Operators

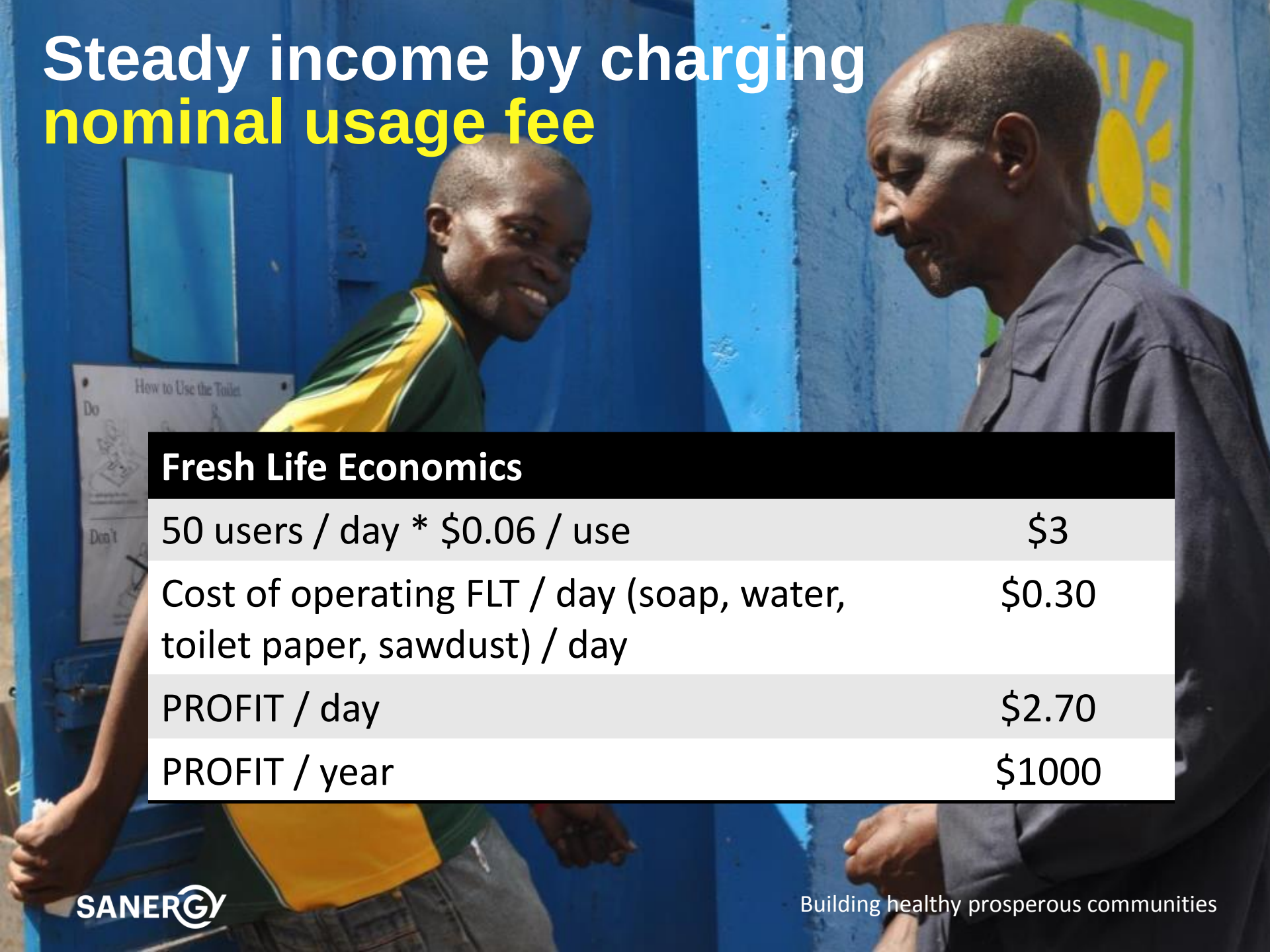
- **Business in-a-box**
- **Finance support via KIVA**
- **Branding**

Aspirational marketing

SANERGY

Building healthy prosperous communities

Steady income by charging nominal usage fee



Fresh Life Economics	
50 users / day * $0.06 / use	$3
Cost of operating FLT / day (soap, water, toilet paper, sawdust) / day	$0.30
PROFIT / day	$2.70
PROFIT / year	$1000

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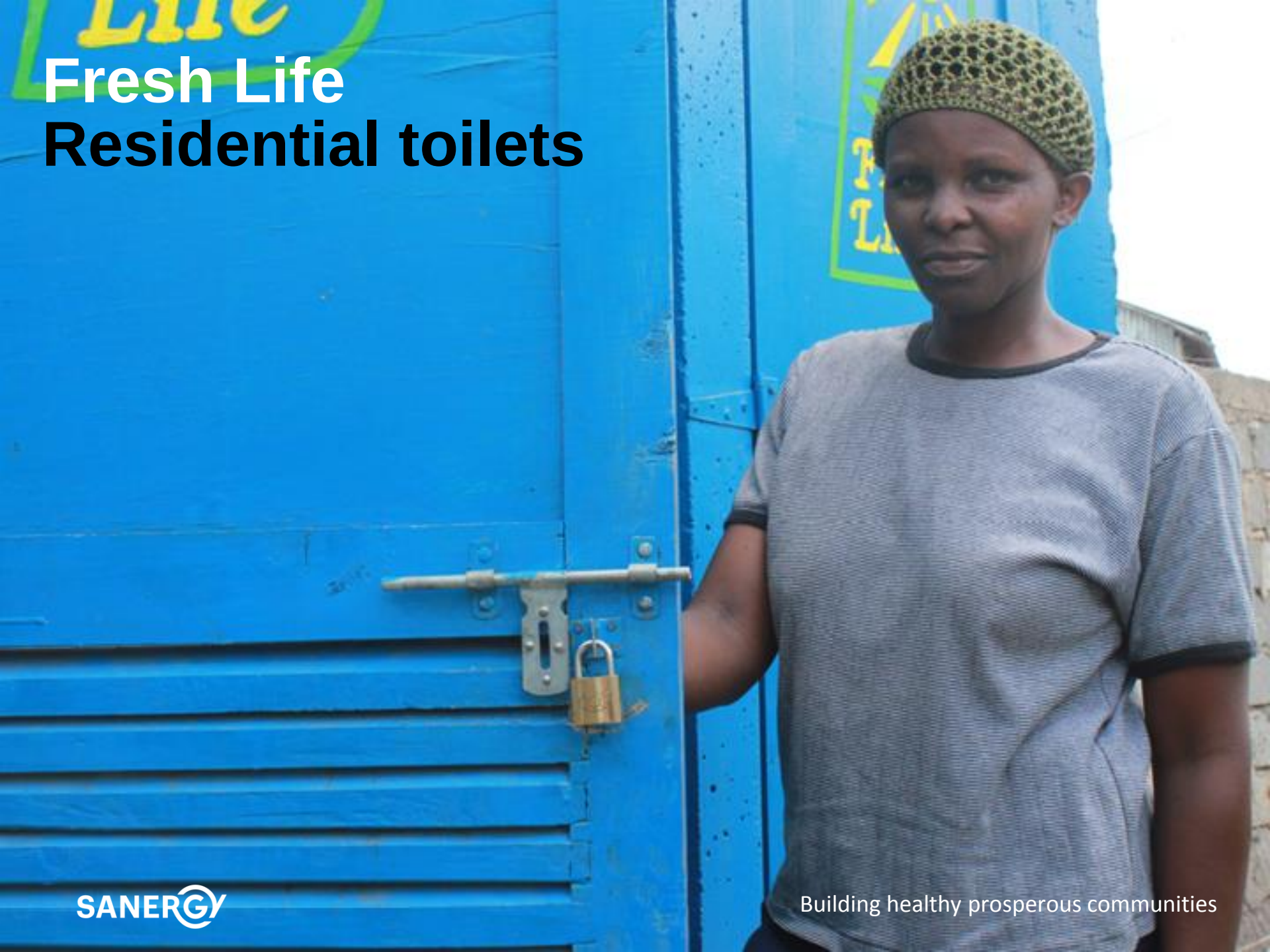
Fresh Life
WASH in schools
Fresh Life
SANERGY
Building healthy prosperous communities

Fresh Life
Residential toilets



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Government relations

Safe & easy
waste removal

SANERGY

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Nutrient-rich organic fertilizer distributed to Kenya's farms

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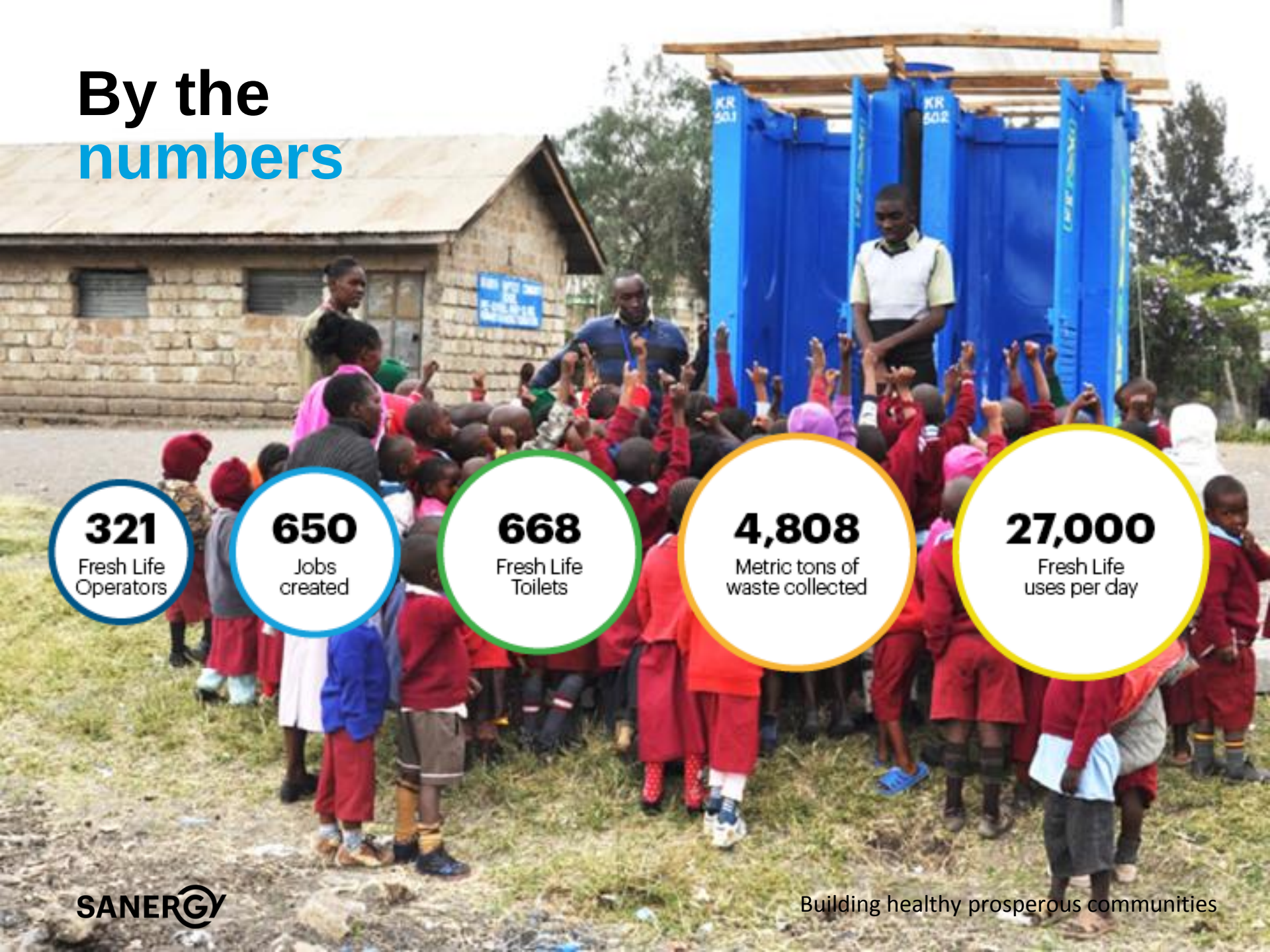
By the numbers



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Asante sana!

SANERGY

Building healthy prosperous communities

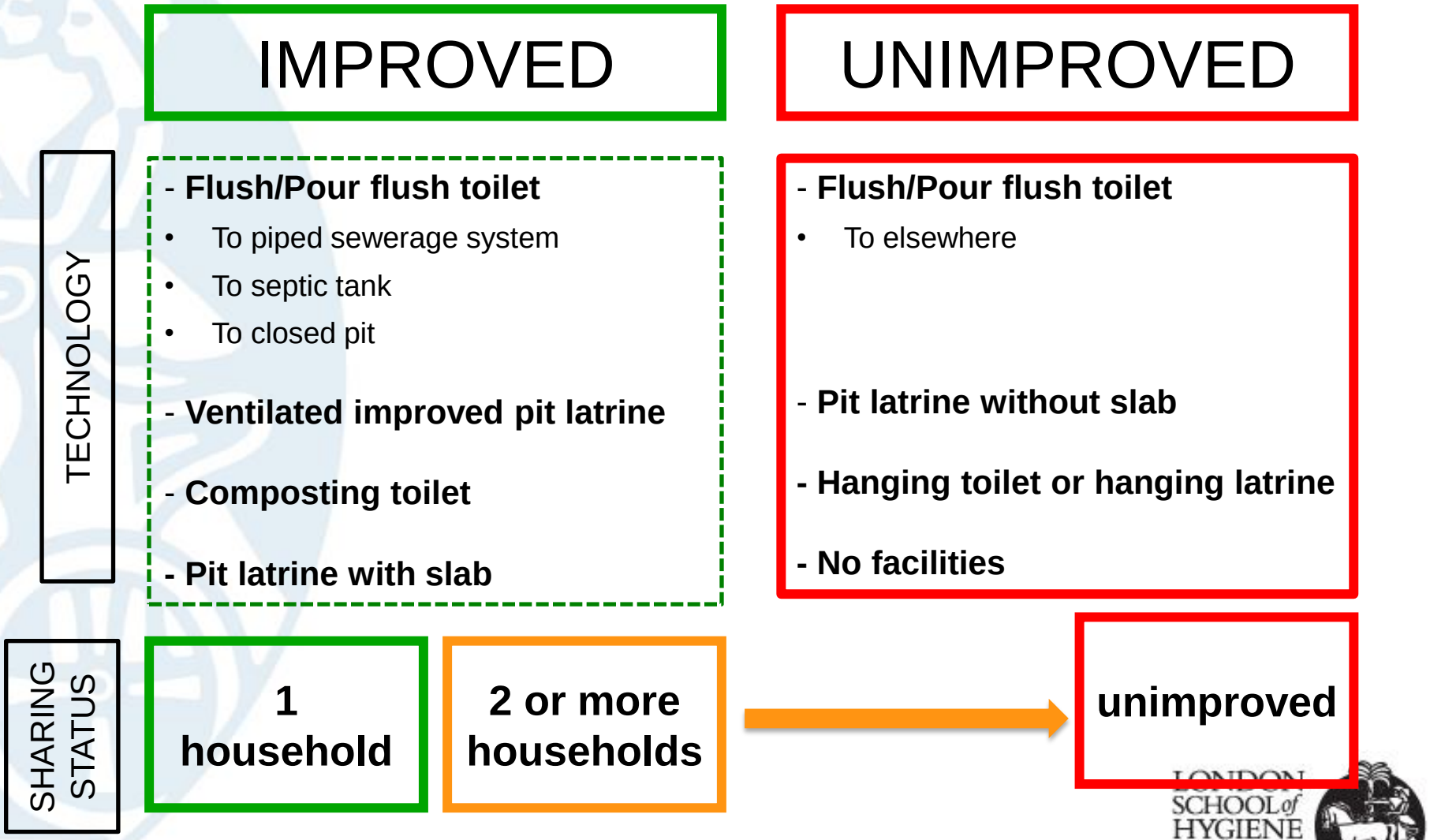
Shared Sanitation and universal coverage; is it an improved form of sanitation, or not?

Belen Torondel
Environmental Health Group

share Sanitation and Hygiene Applied Research for Equity

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

WHO/ UNICEF JMP classification of sanitation



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Sharing facilities

- Estimate 760 million people rely on public and other shared sanitation (JMP 2013)

- Globally, the number of users has increased by 425 million since 1990 – increasing from 6 per cent of the global population to 11 per cent in 20 years

- Nearly a fifth of the population of sub-Saharan Africa and Eastern Asia reports using shared sanitation

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Background

- Historically, public and other “shared facilities”—those used by two or more households—are excluded from the definition of “improved sanitation” regardless of the service level.

- According to the JMP, the reason stems from concerns that shared facilities are unacceptable, both in terms of cleanliness (toilets may not be hygienic and fully separate human waste from contact with users) and accessibility (facilities may not be available at night, or used by children, for instance).

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Proposed Policy Change

- JMP is considering a revision to is policy that would include shared sanitation as “improved”—and thus scored toward the post-MDG targets—if the facilities meet the required levels of service and are shared among no more than 5 families or 30 persons, whichever is fewer, where the users are known.

- This proposed change is **based on advice** from an expert committee.

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Minutes of Sanitation Task Force, December 2012.

Current Research on Shared Sanitation

- Analysis of data from GEMS case-control study to assess odds of severe diarrhoea based on number of households sharing latrines (Baker et al.)
- Analysis of JMP data to map geographic and demographic scope of shared sanitation (Heijnen et al.)
- Analysis of JMP data to investigate association between shared sanitation and diarrhoea (Fuller et al.)
- Systematic review of shared sanitation versus individual household latrines (Heijnen et al.)
- Field investigation of shared sanitation versus individual household latrines in Indian slums (Heijnen et al.)

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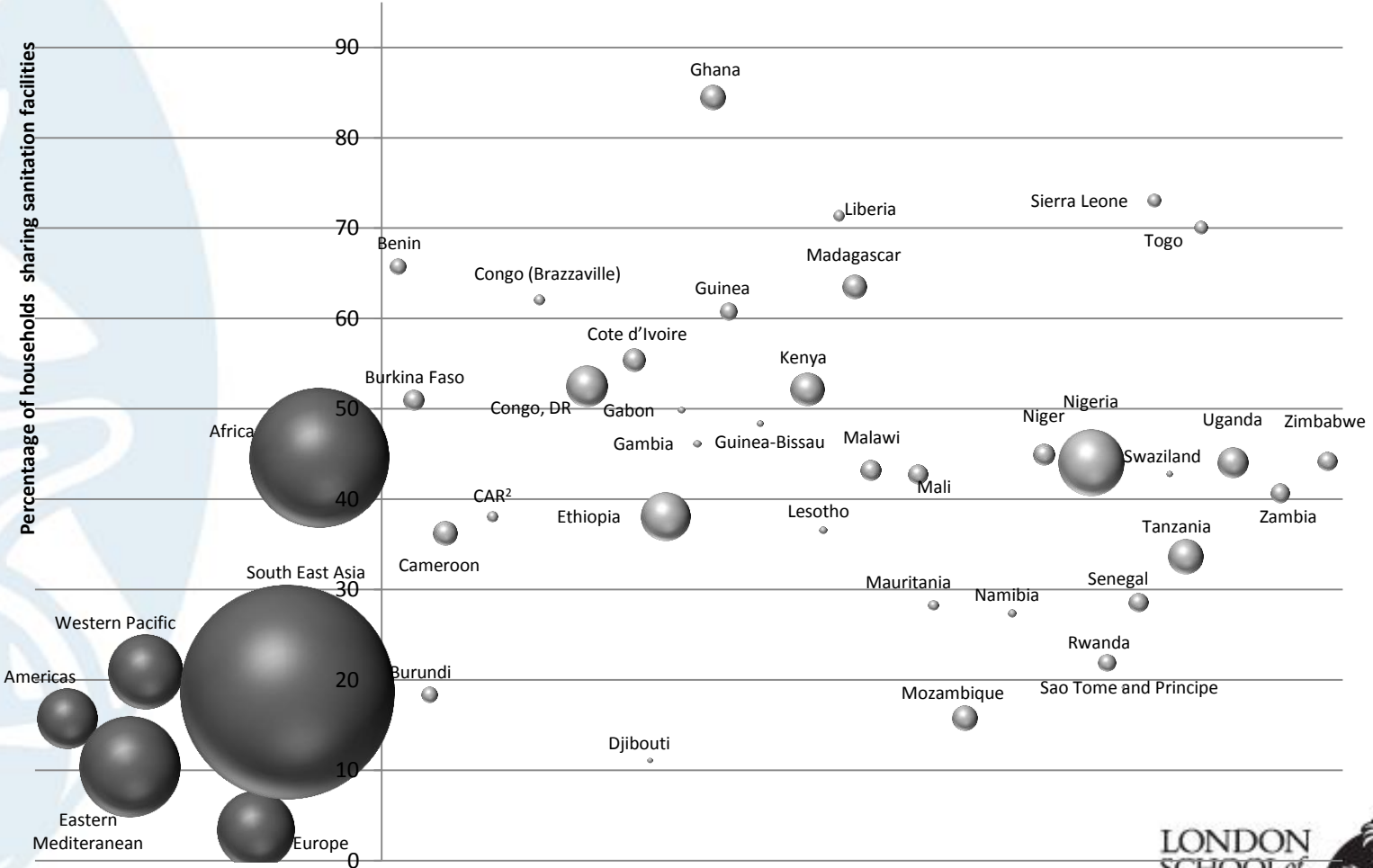
Geographical Scope of Shared Sanitation



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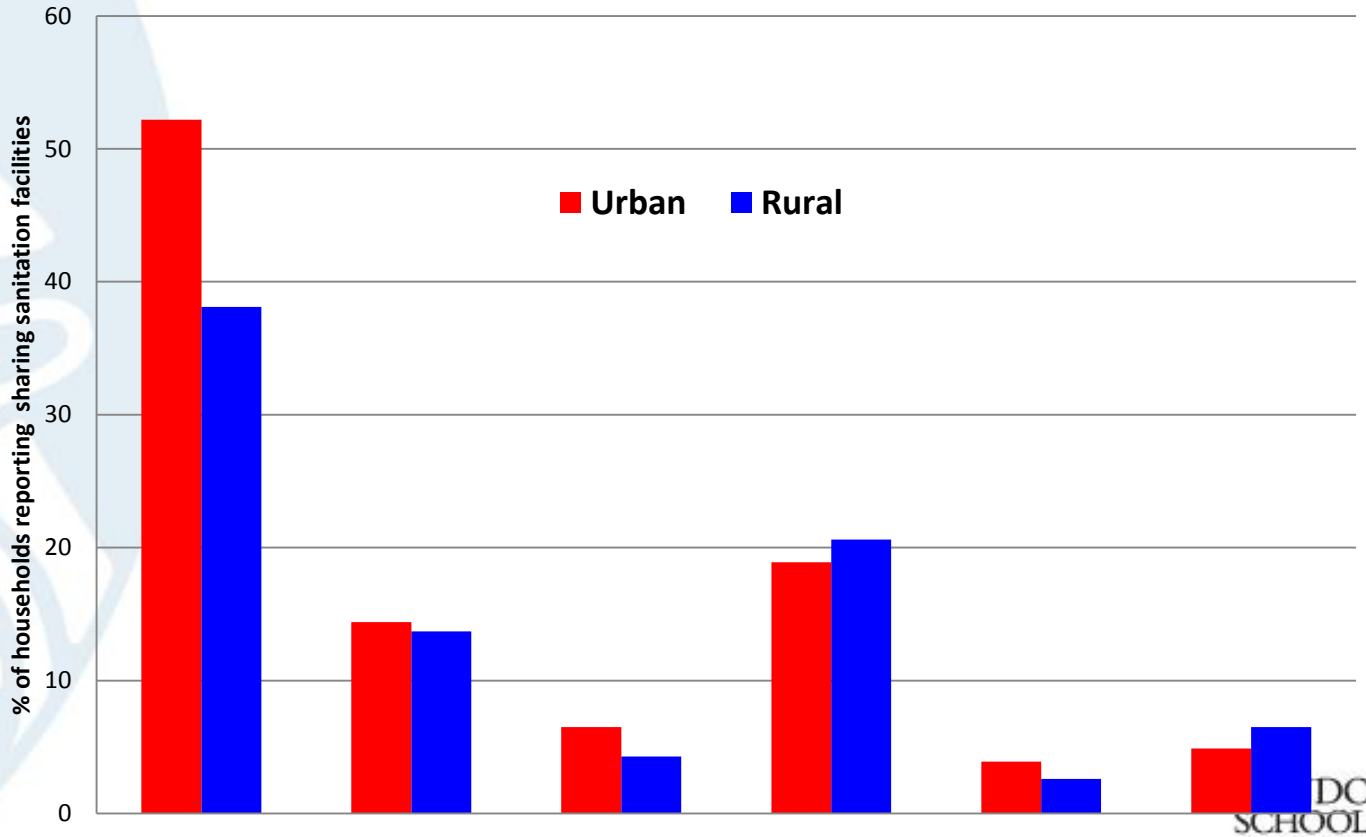
Urban/Rural Prevalence of Shared Sanitation by Region



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Systematic Review

- Shared sanitation defined as any type of facilities intended for the containment of human faeces and used by more than one household, but excluded public facilities.
- Health outcomes included diarrhoea, helminth infections, enteric fevers, other faecal-oral diseases, trachoma and adverse maternal or birth outcomes. Studies were included regardless of design, location, language or publication status.
- **Results:**

  -Nineteen studies covering 19 countries met the review's inclusion criteria.

  -Studies show a **consistent pattern of increased risk of adverse health outcomes** associated with shared sanitation compared to individual household latrines.
  - Diarrhoea
  - Helminth Infection
  - Adverse birth outcomes

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Helminth Infection

- Number of persons per toilet was positively associated with *Ascaris lumbricoides* infection intensity (Tsushika 1995).
- Sharing toilets with another family increased the risk of intestinal helminths (adjusted OR 1.95[95% CI 1.38-2.75]) and from protozoan parasites (adjusted OR 1.65 [95% CI 1.06-2.58]) (Mahfouz 1997)
- Using a community latrine rather than a private latrine increased for *S. stercoralis* infection among adults (adjusted OR 2.72 [95% CI 1.57-4.72) and children (adjusted OR 2.43 [95% CI 1.35-4.38]), but not for those sharing with neighbors (Hall 1994)
- Sharing latrine with other families and the absence of piped water inside the house were associated with a significantly higher intensity of infection for *A. lumbricoides* ($p<0.001$) and for *T. trichiura* ($p<0.05$) but not *for S. mansoni* (Curtale 1998)
- Phiri et al. found no statistically significant risk associated with *A. lumbricoides*, hookworm, *T. trichiura*, or *S. stercoralis* infection and shared latrine facilities

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Conclusions

- A large and growing population relies on shared sanitation, particularly in urban settings in Africa and Asia
- Evidence to date does not support a change of existing policy of excluding shared sanitation from the definition of improved sanitation used in international monitoring and targets.
- However, such evidence is limited, does not adequately address likely confounding, and does not identify potentially important distinctions among types of shared facilities.
- Further research is necessary to determine the circumstances, if any, under which shared sanitation can offer a safe, appropriate and acceptable alternative to individual household latrines.

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Benchmarking & County Profiles

Yolande Coombes

WORLD BANK GROUP
Water

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water and sanitation program

Data sources

- Economics of Sanitation Initiative (ESI)
- Kenya County Sanitation Benchmarking
- County Sanitation Enabling Environment Assessments
- 2009 Kenya National Bureau of Statistics, Population and Housing Census
- Commission of Resource Allocation, Kenya County Factsheets from June 2013

Kenya County Sanitation Benchmarking

Timely Reporting	Budget for Sanitation /5	Number of ODF Claim /10	Cost per ODF Claim /10	Economic Costs of Poor Sanitation /10	Pupil: Latrine Coverage Girls /10	Pupil: Latrine Coverage Boys /10	Household Latrine Coverage Rate /15	Number of Handwashing facilities per school /10	Rate of Open Defecation /10	Number of ODF Villages (DPHO Certified) /10	Percent of ODF Targets Achieved /10	Percent of ODF Villages /10
0	10	3	0	10	10	15	0	8	8	5	5	

Counties compared and ranked according to 12 weighted indicators selected to give a broad picture of sanitation in the county

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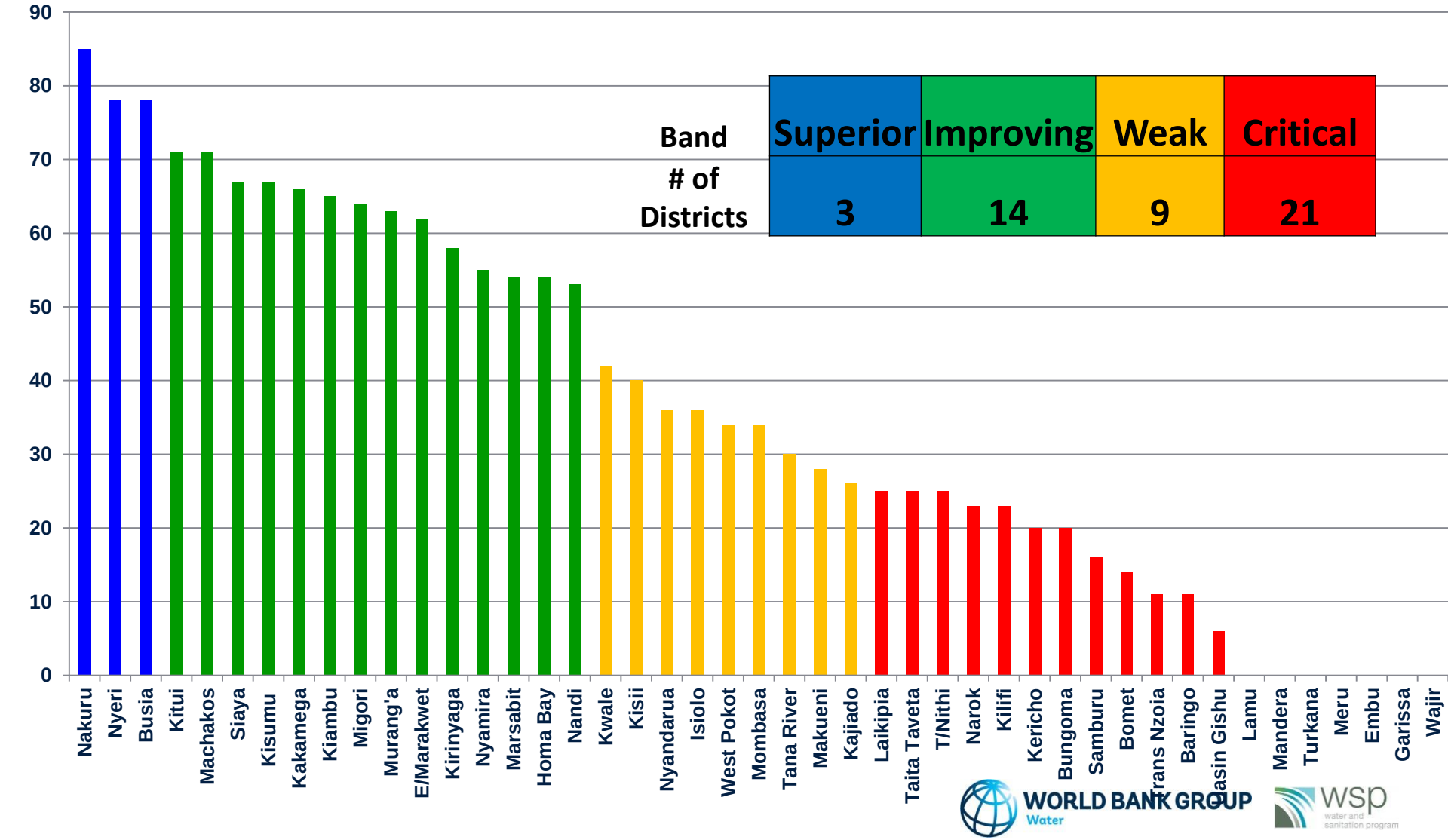
2014 Benchmarking



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Water

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At 50, Sanitation remains a major challenge in Kenya

BY AUSTINE OKANDE

As Kenya marked the World Toilet Day (WTD) on 19th November, nearly 6 million rural Kenyans still did not have access to basic sanitation, a situation that has barely changed... This is according to ... report 2010.

In a ... WSP... impact ... defecation ... costly ... across the ... cost Kenya ... which is ... counties lose ... year due to poor ...

Dr. Kepha ... Health Officer ... posits that sanitation is important because ... proportion of Kenya's ... is sanitation-related.

He notes that, out of the 19,500 Kenyans, including children under the age ... who die each year from ... nearly 90% is directly ... poor water, sanitation and ...

Although Kenya ranks ... 35 participating African ... on the eThekwini commitments on sanitation, Dr. Ombacho ... that a lot still needs to be done to improve sanitation and hygiene ... country to meet the vision 2030 goal of universal access.

As he reiterates the ministry's commitment in the provision of sanitation services, Dr. Ombacho observes that culture and poor attitudes towards improved sanitation, low access to safe drinking water, high illiteracy levels and low budgetary allocation by the national and county governments are some of the major impeding factors towards the achievement of proper sanitation. The UN-Habitat recently acknowledged that on the basis of current trends, ...

Kenya is unlikely ... for water ... the ...

... annual ... access ... universal ... citizens.

Kenya's 47 Counties lose Millions of Money due to Poor Sanitation; A call for Action!

By Benjamin Murkomen, Janet Mule, Pascal Riungu, Lillian Mbeki and Yolande Coombes

State Department for Health

Division of Environmental Health

The Ministry of Health with the Support of Water and Sanitation Program of the World Bank embarked on a Sanitation benchmarking exercise from August this year. The findings of this exercise indicated that Nyeri County performed very well, 13 counties were above average, 14 counties average and 19 counties below average. The maximum score a county could achieve was 120 across several criteria including number of latrines, number of communities with no individual defecating in the open, the number of toilets per pupil, whether there are hand washing facilities and the budgetary allocation for addressing lack of sanitation.

KENYA 47 COUNTIES SANITATION RANKING

#	County	Grand Score	Rank	Amount lost each year (Ksh)

KENYA 47 COUNTIES SANITATION RANKING

County	Grand Score	Rank	Amount Lost each year (Ksh)

Timely Reporting	Budget for Sanitation	Number of ODF Claims	Cost per ODF village	...	Percent ODF Target Achieved	Percent of ODF Villages	RANK	GRAND SCORE	Amount Lost each year (Ksh)

County Benchmarking Table

County enabling environment assessment

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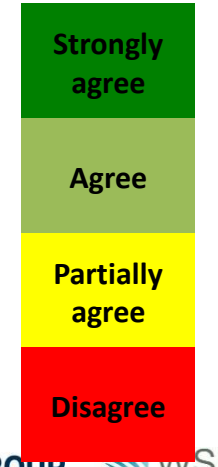
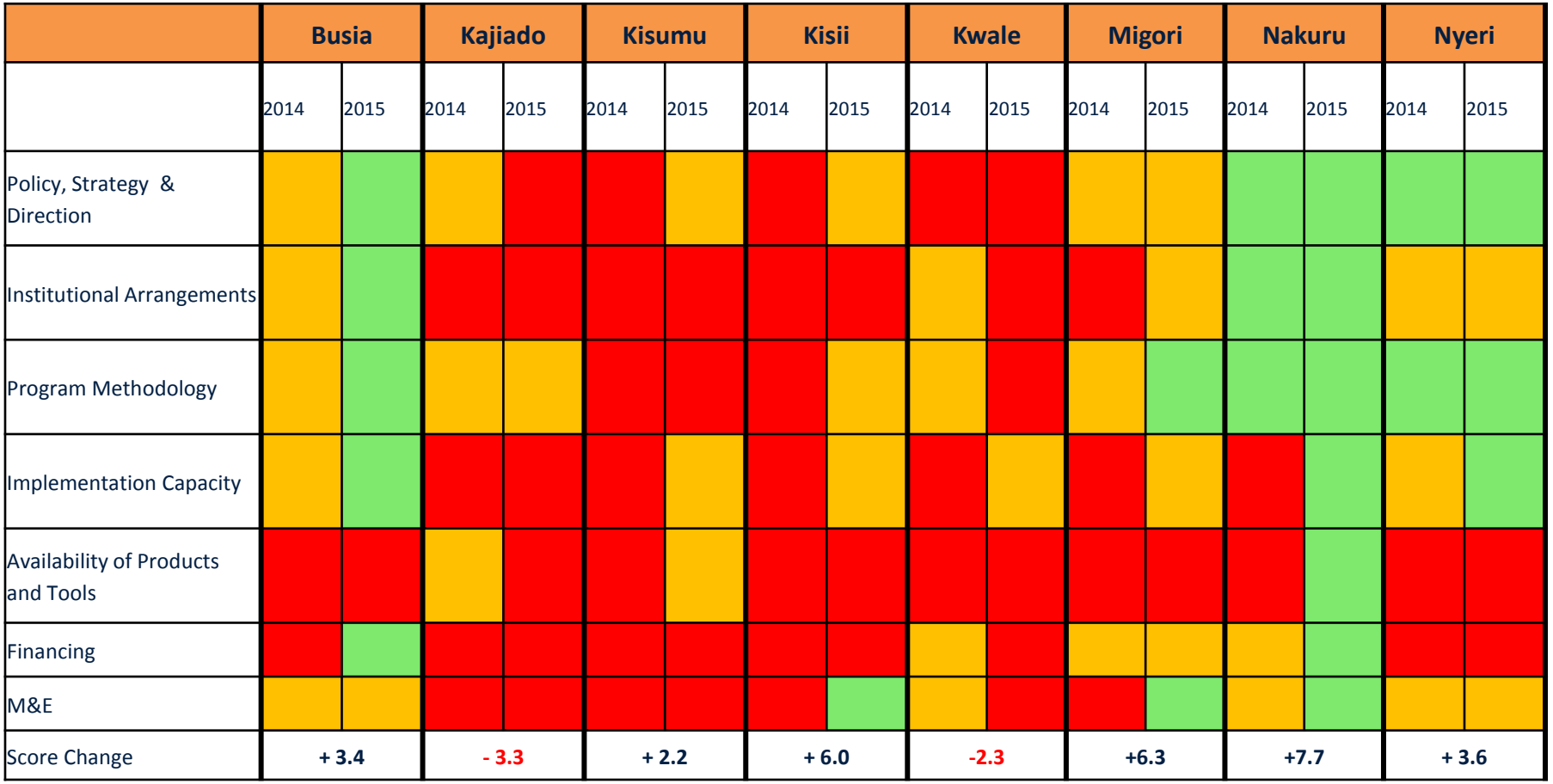
Kiambu enabling environment assessment

- policy, strategy and direction
- institutional arrangements
- program methodology
- implementation capacity
- availability of products and tools
- financing
- monitoring and evaluation



Comparison Between Years



	Busia		Kajiado		Kisumu		Kisii		Kwale		Migori		Nakuru		Nyeri	
	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
Policy, Strategy & Direction																
Institutional Arrangements																
Program Methodology																
Implementation Capacity																
Availability of Products and Tools																
Financing																
M&E																
Score Change	+ 3.4		- 3.3		+ 2.2		+ 6.0		-2.3		+6.3		+7.7		+ 3.6	

WORLD BANK GROUP Water

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MINISTRY OF HEALTH

County Sanitation Profiles

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State of Sanitation in Nakuru County

POPULATION[1]

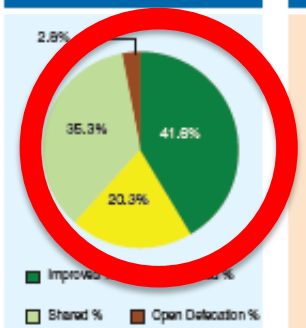
1,603,325

Urban
46%

Population under 5 years
9.5 %

Population density
214 / km²

Sanitation coverage[2]



Why does coverage matter?

Sanitation is a constitutional right in Kenya, the responsibility for which rests on the shoulders of the County Government.

Universal access to improved sanitation yields maximum health, social and economic benefits.

Nakuru is ranked number 2 out of 47[3] in the county sanitation benchmarking by the MOH according to the following key indicators:

RANK out of 47	Timely Reporting	Budget for Sanitation /5	Number of CDF Claim /10	Cost per CDF Claim /10	Economic Costs of Poor Sanitation /10	Pupil Latrine Coverage Girls /10	Pupil Latrine Coverage Boys /10	Household Latrine Coverage Rate /15	Number of Handwashing facilities per school /10	Rate of Open Defecation /10	Number of CDF Villages (ODF-D Certified) /10	Percent of CDF Targets Achieved /10	Percent of CDF Villages /10
2	⚑	5	10	10	0	10	10	15	10	3	5	5	5

Nakuru County loses 978 million KES each year due to poor sanitation[4]. This includes losses due to access time, premature death, health [illegible] costs and productivity. This estimate does not include some costs that could be significant (such as water pollution and tourism) and is therefore likely to under-estimate the true cost of poor sanitation.

50.7%[5] of children in Nakuru are stunted

Why does stunting matter?

Unimproved sanitation and open defecation have been linked to low height for age scores in children. Stunted children suffer a higher mortality due to infectious diseases such as diarrhoea, pneumonia and measles as well as being more likely to have poorer cognitive and educational outcomes. Adults who are stunted are more likely to earn less.

KENYA

wsp water and sanitation program

ECONOMIC IMPACTS OF POOR SANITATION IN AFRICA

March 2012

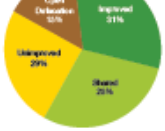
Kenya loses KES27 billion annually due to poor sanitation

Poor sanitation costs Kenya 27 billion Kenyan Shillings each year, equivalent to US$324 million,* according to a desk study carried out by the Water and Sanitation Program. This sum is the equivalent of US$8 per person in Kenya per year or 0.9% of the national GDP.

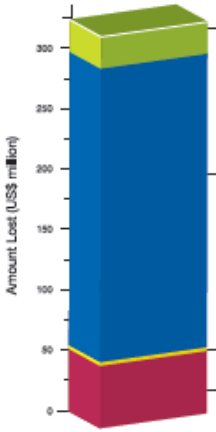
- 21 million Kenyans use unsanitary or shared latrines.
- 5.6 million have no latrine at all and defecate in the open.
- The poorest quintile is 270 times more likely to practice open defection than the richest.

Open defecation costs Kenya US$88 million per year – yet eliminating the practice would require less than 1.2 million latrines to be built and used.

Kenya sanitation coverage



Source (JMP 2010)



*1US$ = KES82.252 (2010 Average)
GDP Source: World Bank

US$26 million lost each year in Access Time:
Each person practicing open defecation spends almost 2.5 days a year finding a private location to defecate leading to large economic losses. This cost falls disproportionately on women as caregivers who may spend additional time accompanying young children or sick or elderly relatives. This cost is likely to be an underestimation as those without toilets, particularly women, will be obliged to find a private location for urination as well.*

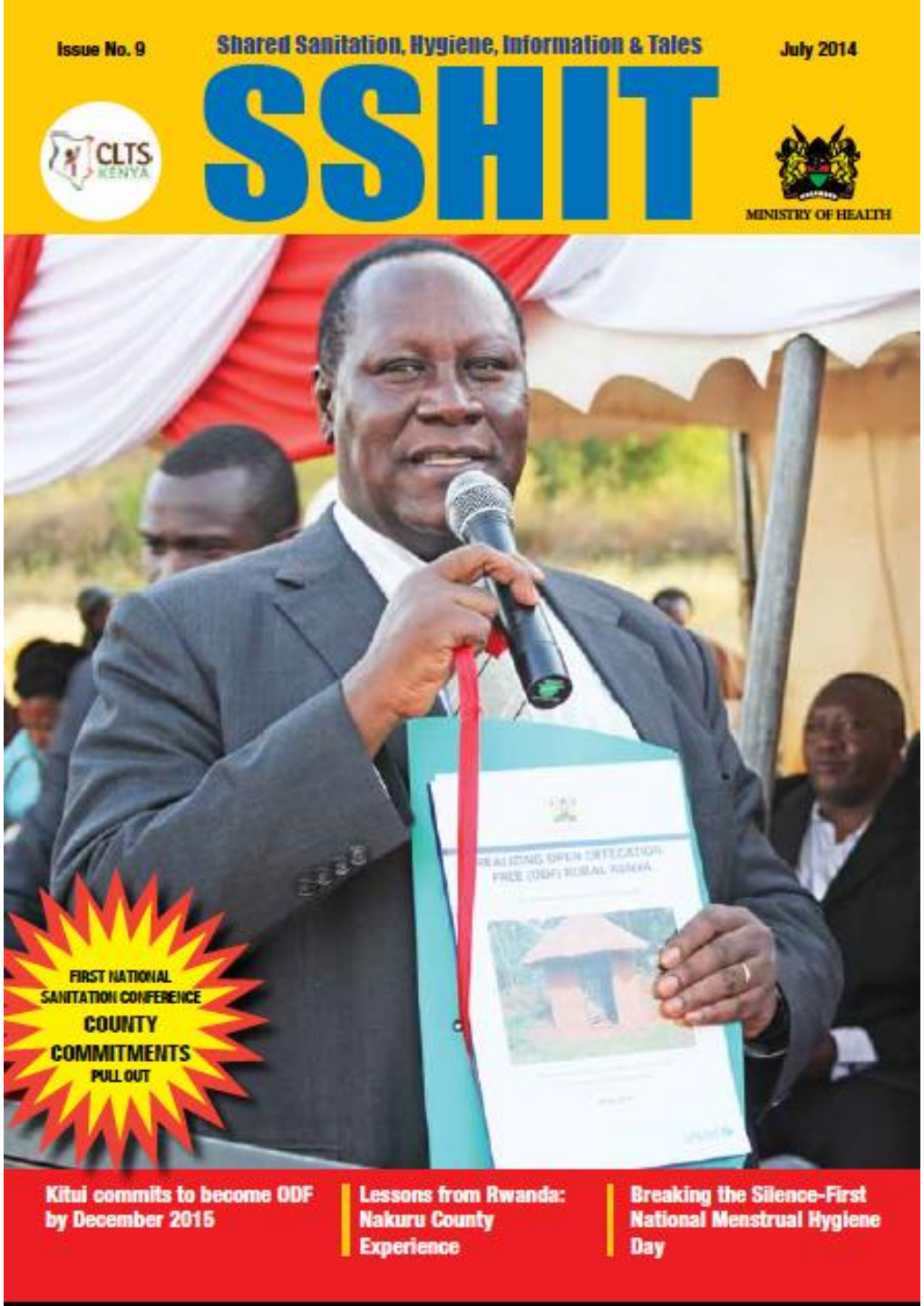
US$244 million lost each year due to Premature Death:
Approximately 19,500 Kenyans, including 17,100 children under 5, die each year from diarrhea – nearly 90% of which is directly attributed to poor water, sanitation and hygiene (WASH). * In addition poor sanitation is a contributing factor – through its impact on malnutrition rates – to other leading causes of child mortality including malaria, ALRI and measles.

US$2.7 million lost each year due to Productivity Losses whilst sick or accessing healthcare:
This includes time absent from work or school due to diarrheal disease, seeking treatment from a health clinic or hospital, and time spent caring for under-5's suffering from diarrhea or other sanitation-attributable diseases.

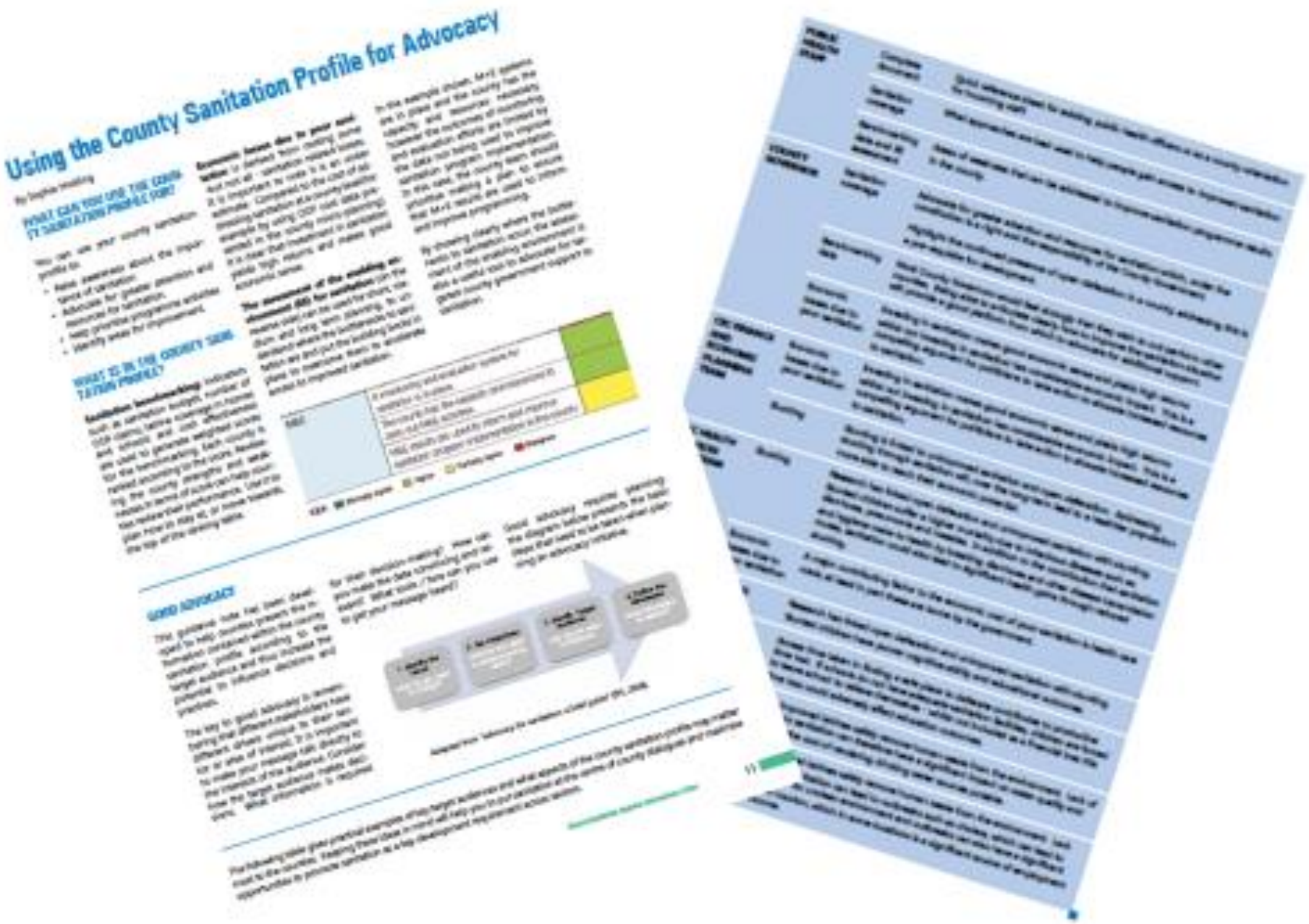
US$51 million spent each year on Health Care:
Diarrheal diseases directly, and indirectly via malnutrition (and its consequences for other diseases such as respiratory infections and malaria) are all leading causes of morbidity. Costs associated with health seeking behaviour include consultation, medication, transport and in some cases hospitalisation – which place a heavy burden on households and government spending.

Nearly every County Executive referred to their county's benchmarking rank and ESI figures during their addresses at national conference

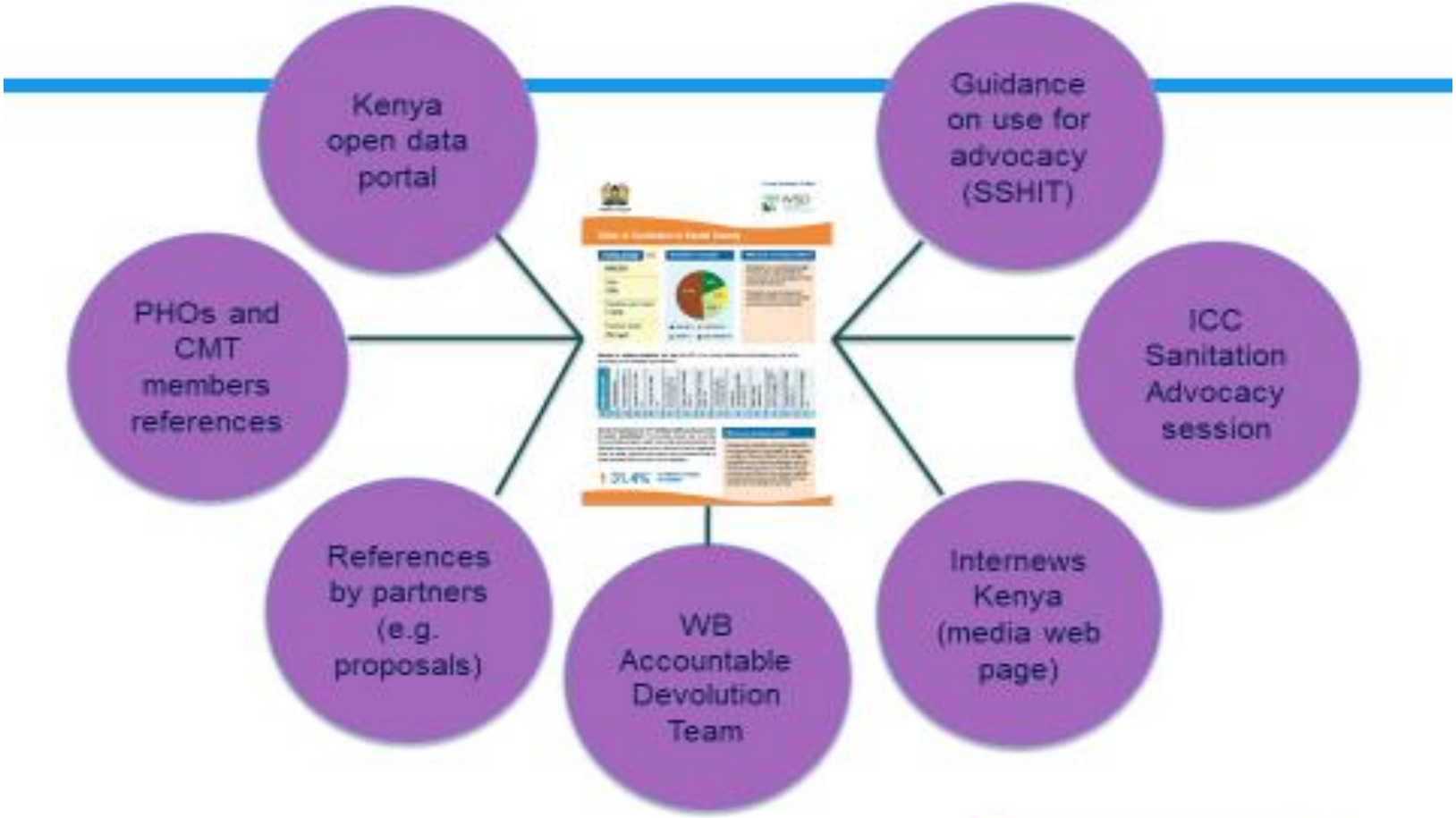
Accompanying guidance was published in SSHIT magazine



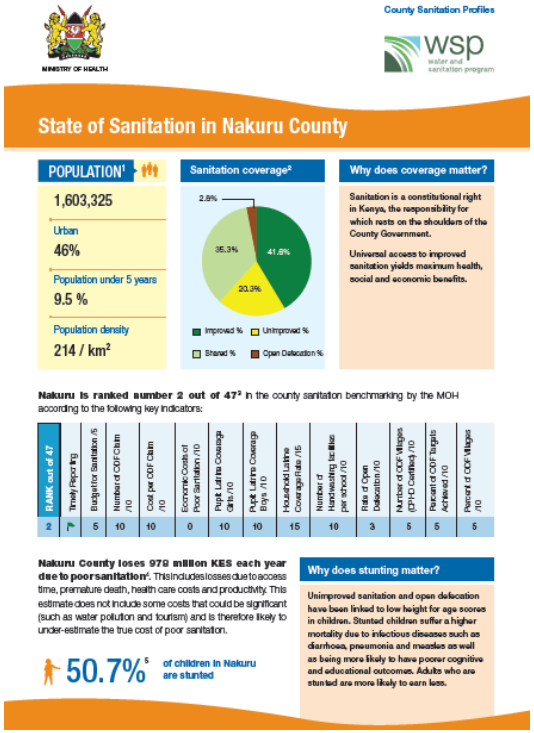
Using the County Sanitation Profile for Advocacy



Other uses


Kenya open data portal
Guidance on use for advocacy (SSHIT)
PHOs and CMT members references
ICC Sanitation Advocacy session
References by partners (e.g. proposals)
WB Accountable Devolution Team
Internews Kenya (media web page)

- **The County Sanitation Profiles are useful to both sector and non-sector actors**
- **Having all the information in one place makes it accessible and *used***
- **The profiles are cheap to develop using existing information, and can be updated.**



WORLD BANK GROUP Water

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Thank you

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Water

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www.wsp.org | www.worldbank.org/water | www.blogs.worldbank.org/water | @WorldBankWater

Contributing to the progressive realization of the WASH in schools agenda: targeting school management for behavior change

WASH United

GLUK-SHARE Sanitation Symposium

30th April 2015

WASH United: A brief introduction

- An international, non-profit organisation, headquartered in Berlin, Germany; operating in Africa, South Asia & at the global level
- Works to
  - Change attitudes around MHM, sanitation & hygiene
  - Facilitate behaviour change at scale
  - Engage in policy discussions
  - Advance the realisation of the human rights to water & sanitation
- We are software people…. Known for our signature innovative approaches ☺

WASH United's methods

Set of Fun Educative Games + Role models/positve deviation + supporting IEC material + diffusion of knowlede & skills + commitment to responsibilities

Background to a recent project: WINS+

Our strategy:

- Developing & improving B.C. methodology
- Direct engagement with school community
- Building capacity of partner organizations to integrate effective B.C.C in their work, using our approaches
- Large scale awareness campaigns

In all our strategies, we are constantly aware of the complex challenge of providing safe & adequate infrastructure to school communities

How then do we contribute to increasing sustainable access to safe & adequate infrastructure without ever constructing a single one?

Project WINS+

Project WINS+ in brief

- In May 2014, WASH United partnered with Maji na Ufanisi to implement a WASH in schools project
- Backstopping provided by:
  - MOH
  - MOEST
  - Directorate of education, Nairobi County
  - TSC
  - CSOs i.e. School WASH TWG, AMREF, Care Kenya, Save the Children & others
  - Water Sector institutions including WSTF, WASREB,
- The project followed the School Health policy & guidelines i.e. a comprehensive school Health project with a focus on WASH
- Schools engaged
  - Located in up-market areas, but serving populations living in urban poor areas
  - Had different access to infrastructure

The project objectives were that, by December 2014 to....

1. Contribute to building capacity of school communities in 19 primary schools
    1. To operationalize school management committees;
    2. To assess & prioritize WASH in the school action plan
    3. To take lead role in improving WASH in schools
2. Undertake comprehensive school health assessment & WASH knowledge evaluation
3. Contribute to increasing knowledge for students on WASH

Methodology applied for the project

- WASH United's innovative methodology for WASH behaviour change i.e. World Toilet Cup Game, Blue Hand Game; Hand washing Challenge; treasure hunt game; musical toilets; students discussions
- Training material for building capacity of SMCs as outlined in the Kenya comprehensive school health implementation handbook including the following tools
- IEC material including the national school health policy and guideline & hand book
- For monitoring and Evaluation
  - WASH knowledge evaluation:
  - Key informant interviews and focused groups discussions
  - M & E tools provided for CSHP i.e.

The project activities…

1. SMC Workshop
2. Dissemination of school health policy & guidelines
3. Comprehensive school WASH data collection
4. Activities in schools
    1. WASH behavior change activities using WASH United's innovative method
    2. Engaging students in assessing WASH in their schools & make recommendations & commitments
    3. Students construction of tippy taps
4. Continuous follow up at schools
5. Continuous multi-stakeholder engagement:
    1. School WASH TWG;
    2. Relevant ministries & government institutions
    3. Partnering with other organizations implementing the CSHP in Nairobi (Care Kenya & Save the Children)

- As an organization that focuses on software;
  - Yet wanting to contribute to increasing access to safe and adequate WASH & MHM infrastructure in schools
  - And to adoption & maintenance of positive WASH behavior including correct & consistent use of improved sanitation in schools
- The following are some lessons we have learnt from this project.....

What we have learnt

- Recognize School management as key decision makers influencing profile of the WASH agenda in schools
- Progressive realization:
  - define the targets & break down to annual bits
  - Include school WASH agenda in sector planning & assessment
- Need to explicitly define responsibilities regarding development of WASH infrastructure among stakeholders: education, health, water & non-state actors
- Advocacy for increased allocation of funds earmarked for WASH & MHM & capital grants for infrastructure development
- Involve students & parents: responsibilities
- Use innovative & effective strategies for behavior change on WASH & engaging with decision makers

What we have learnt

- Targeting school management for behavior change
  - Prioritization of WASH in school action plans
  - Adoption of innovative solutions
  - Financing opportunities available to the schools including from water sector institutions
  - Progressive realization of the goals
- Development partners
  - To what extent are the plans for the school interventions informed by the school's action plans?
  - Re-orientation of approach needed, in order to reduce dependence & increase sustainability

Challenges

- WASH infrastructure capital intensive: challenging to use the FPE funds to plan for this
- Changing behavior of school decision makers as intervention to increase access to infrastructure is time intensive intervention needing also significant networks with sources of funding for WASH to link schools with
- Manage expectation: many school communities are oriented to be recipients from development partners
- Significantly harder to raise funds for projects looking to build capacity of school management with the intention of them planning for interventions..... Long term to realize outcomes
- Financing opportunities not necessarily universally available to all schools: informal schools
- Research gap: outcome evaluation needed, with outcomes clearly defined as WASH infrastructure developed by direct intervention of school management as influenced by this capacity building intervention

Thank you……

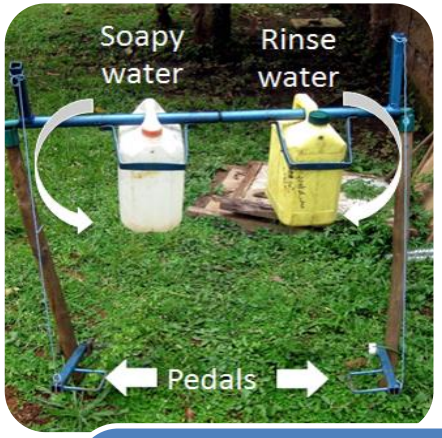
Soapy Water Handwashing Stations Pilot Study in Peri-Urban Kisumu

Jaynie Whinnery, Senior Research Associate

Innovations for Poverty Action

April 30, 2015

Introduction



WASH Benefits Study

- Dual Tippy-Tap
- Kakamega and Bungoma
- 2012 to 2016

Soapy Water Pilot Study

- Prototype HWS
- Peri-Urban Kisumu
- 2013 to 2016

Scale-Up Potential

- Final HWS
- Nationwide and beyond?
- 2016?

Objectives

HWS Redesign

Innovation of a new handwashing system

- Adaptable
- Affordable
- Convenient
- Durable
- Desirable

Pilot Study

Evaluation of feasibility, effectiveness, and demand in potential scale-up settings

- Primary Schools
- Dispensaries
- Households

Methodologies

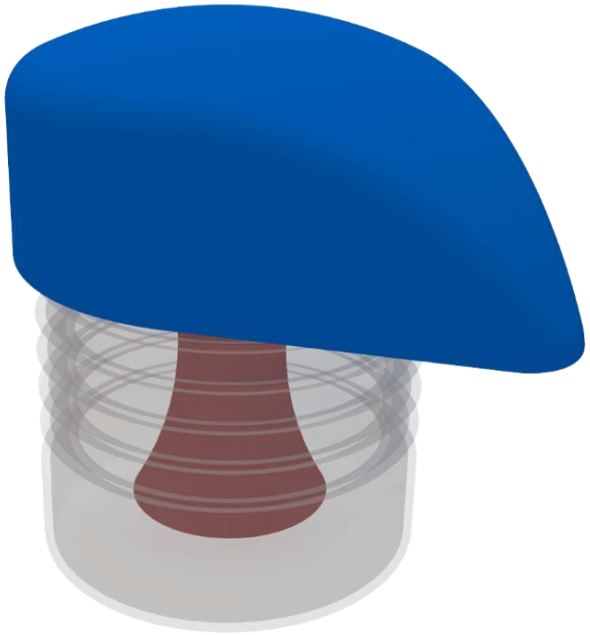
- Human-Centered re-design process
- Stepped-Wedge Randomized Control Trial (RCT) in Primary Schools
- Small-scale Pilot Study in Dispensaries
- Two-phase Willingness to Pay Study with Households
  1. Structured Focus Group Discussions (FGDs)
  2. Take-it-or-leave-it (TIOLI) with randomized voucher offers

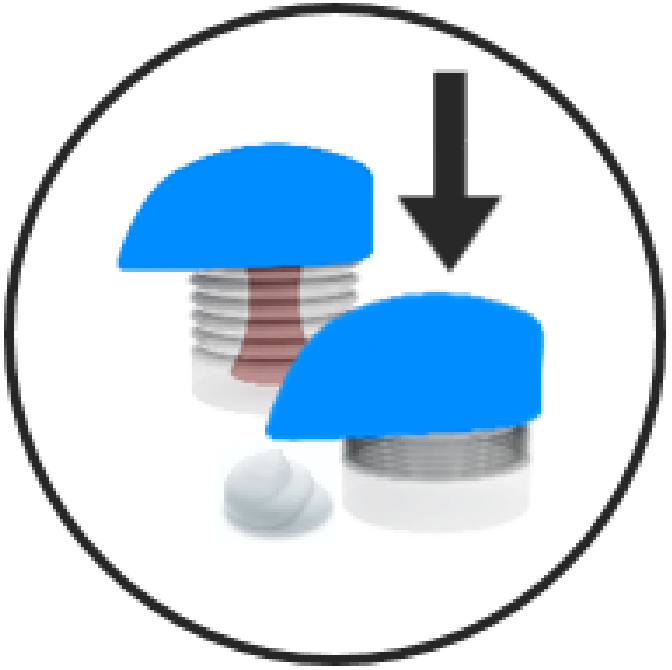
Innovations: HWS Designs

Multiple possible configurations, all with the dedicated purpose of handwashing

Innovations: Soap Foamer

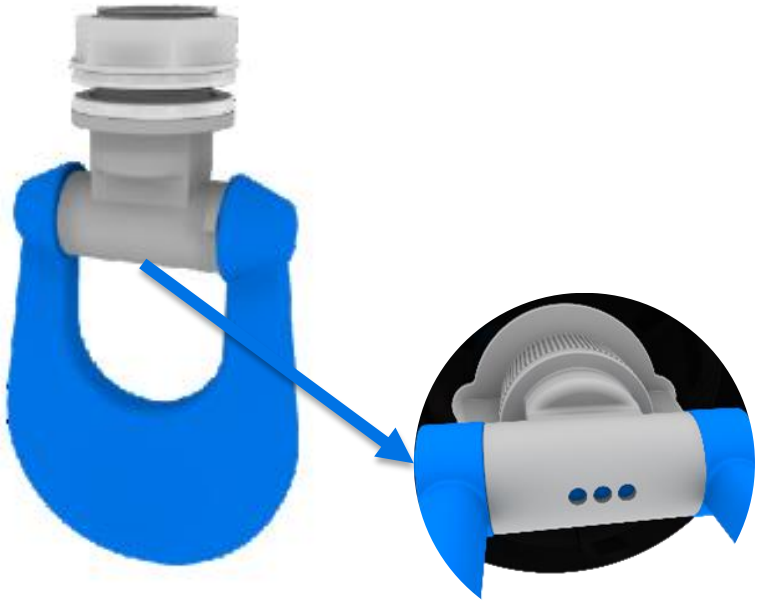
- Uses soapy water to create foam that is fun to use
- More than 100 hand-washes with 5 grams of soap





Innovations: Swinging Tap

- Swinging tap is easy to use and more hygienic
- Uses as little as 100 mL of water per hand-wash



Preliminary Redesign Results

Soap and Water Efficiency

HWS Type	Soap Type	Soap per HW (KES)	Water per HW (mL)
Povu Poa Pipe HWS	Powdered	0.002	238
Sink with metal tap	Bar	0.087	1429
15 L bucket with plastic tap	Bar	0.108	833
20 L barrel with plastic tap	Liquid	0.171	1000

Next Steps: Pilot Study

- Gather opinions in institutional and household settings
  - HWS usability
  - Ease of HWS maintenance
  - Overall impressions
- Measure handwashing behavior
- Observe HWS durability and usage over time
- Understand household willingness to pay
- Collect additional soap and water efficiency data

Next Steps: Scale-up Potential

- Use the variety of data gathered during the pilot study to inform scale-up planning
  - How did the HWS perform in different settings?
  - Which HWS model is preferable in each setting?
  - What final design changes that need to be made?
  - At what price point could this HWS be a potential market-based solution?

The Team

- Principal Investigators
  - Clair Null, PhD, Innovations for Poverty Action
  - Amy Pickering, PhD, Stanford University and Innovations for Poverty Action
  - Pavani Ram, MD, University at Buffalo
  - Wit Wichaidit, MSc, University at Buffalo
- Project Management Team at IPA
  - Rachel Steinacher, Research Manager
  - Jaynie Whinnery, Senior Research Associate
  - Jemima Okal, Associate Field Manager
- Catapult Design
- The SWEETLab at Portland State University

Povu Poa

ipa
INNOVATIONS FOR POVERTY ACTION

USAID
FROM THE AMERICAN PEOPLE

Questions?

PAYMENT FOR SANITATION IN THE INFORMAL SETTLEMENTS OF KISUMU, KENYA: A HEDONIC APPROACH

TICH CONFERENCE

KISUMU, KENYA

29TH APRIL-2ND MAY 2015

Sheillah N. Simiyu

SPL, Stellenbosch University, South Africa

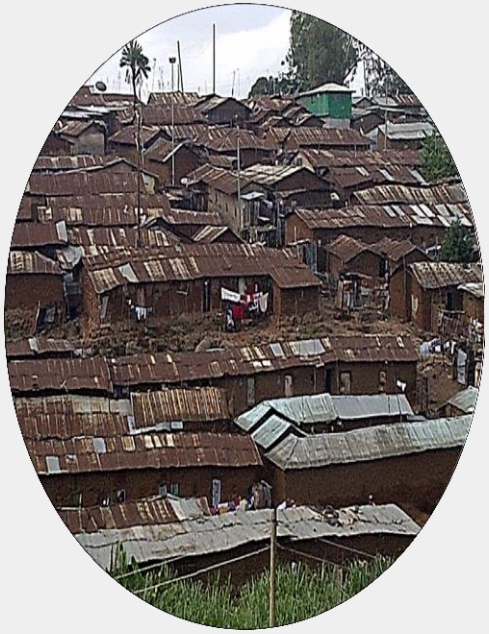
Sheillahshie@gmail.com

Outline

- Introduction
- Methodology
- Results
- Discussion
- Conclusion/ recomendations

Introduction

Economics



Technology

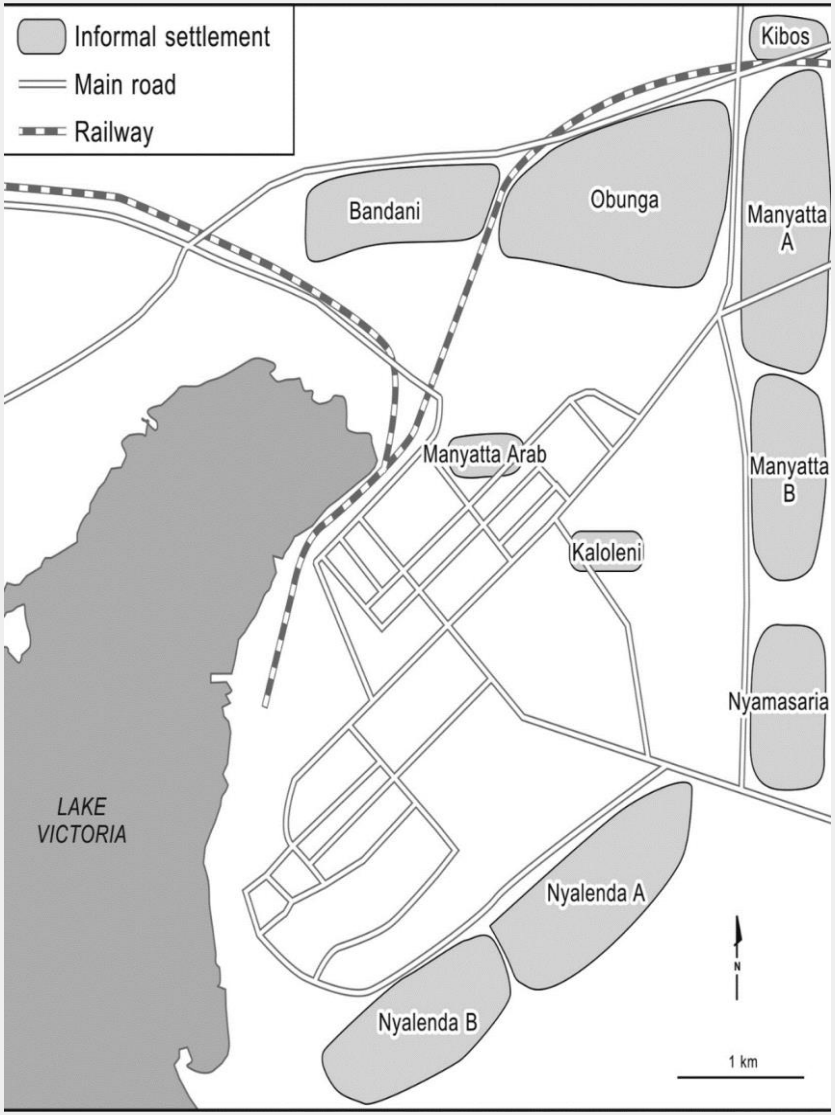
Land Tenure

Mgt Shared sanitation

Economics of sanitation

- Stated Preference vs Revealed Preference
- HPM: P = P(z) = P(z1,...,zn)
- Relationship: Linear, semi log, double log, box cox models

Methodology



Study area: Nyalenda A, Nyalenda B, Bandani, Obunga

Systematic sampling of Plots

Rent = ƒ(housing unit + area(informal settlement)+ plot + neighbourhood + individual characteristics)

Results

Individual/Household characteristics

- Education: 54% with Basic Primary Education
- Occupation: 64% with some form of occupation
- Mean HH income: KES 10588

Neighbourhood characteristics

Access to roads, schools, health centres, markets

Housing and Plot characteristics

Rent:
Mean KES 1212 - range: KES 300 (Bandani)-3500 (Nyalenda B)

Plot:

- Average 7 HH
- Shared services: water and sanitation
- Absentee LL

Results

- Association between area and electricity
- Type of residence and rent paid
- Availability of sanitation with increasing rent
- Better housing=availability of sanitation
- Education level and availability of sanitation facility

Results

- Electricity connection=26% rent increment (and other unit characteristics)
- Sanitation availability= 54% rent increment (av KES 653)
- Reduced WTP for sanitation with increasing numbers of HH in plot

Discussion

- Willingness to pay more for (private) sanitation
- High costs means valuation
- High demand for sanitation services
- Landlords: Decisions on Trade off: Better Housing, sanitation, higher costs
- Barrier: high costs hinder affordability

Recommendations

- Costs of provision vs sanitation marketing
- Higher costs locks out the poor (complexities of poverty in informal settlements)
- Appropriate and affordable technology

Thank you

Asante

WASH RESEARCH PRIORITIES IN KENYA

M. KARAMA

KEMRI

RESEARCH POLICY AND ADVOCACY

TWG

CHALLENGES IN SUSTAINABILITY OF CLTS

- HISTORY OF SANITATION APPROACHES IN KENYA
- LAW ENFORCEMENT
- COMMUNITY PARTICIPATION THROUGH EDUCATION
- BENEFICIARIES TO CONSUMER

ADRESSING SUSTAINABILTY IN ODF

- RESEARCH IN DOMESTICATING CLTS WITH FOLLOW-UP COMPONENTS THAT WILL ENSURE PROGRESS TO IMPROVED LATRINE
- CAPITALISING ON THE COMMUNITY: ENGAGING THEM IN VERIFICATION CERTIFICATION (supervised) AND CONTNUOUS MONITORING

MATERNAL AND CHILD HEALTH

- UNDESTAND THE IMPLICATION OF IMPROVED MOTHERS HYGIENE PRACTICES AT BIRTH AND AFTER BIRTH AND AT FEEDING ON CHILD SURVIVAL
- IMPROVED HYGIENE OF MOTHER ON HER OWN HEALTH.

NEGLECTED TROPICAL DISEASES

- RESEARCH ON THE EFFECT OF SANITAION INTERVENTION ON NTDs eg
- SCHISTOSOMIASIS
- SOIL TRANSMITTED HELMINTHS
- BRUCELLOSIS
- HYDATIDOSIS

EQUITY ANDVULNERABILITY

- AGE –ELDERLY, THE YOUNG
- DISEASE- DISCRIMINATION
- MENTAL
- PHYSICAL
- CULTURAL
- RELIGIOUS
- TECHNICAL

DEVOLVED GOVERNANCE

- EFFECT ON SANITION
- PRIORITISATION
- BUDGET ALLOCATIONS
- HUMAN RESOURSE

SCHOOL HEALTH

- MENSTRUAL HYGIENE MANAGEMENT
- HAND WASHING WATER AND SOAP
- CHILDREN AS AGENTS OF CHANGE INFLUENCING THEIR HOMES
- TUNGIASIS
- SCHOOL FEEDING AND HYGIENE
- ANAL CLEANSING IN SCHOOLS

THANK YOU

t

KENYA

GLUK-SHARE Sanitation Research Symposium, Great Lakes University, Kisumu.

Strengthening National Monitoring & Evaluation

By,

Benjamin Murkomen,

Chief Public Health Officer, M & E

Division of Environmental Health

MINISTRY OF HEALTH

Outline

- Introduction
- Sanitation M & E in Kenya
- Different estimates in Sanitation
- Gaps to be addressed
- Ways of strengthening M & E
- Conclusion

Introduction

- The broad goal in investing in an M&E system in Kenya has been to **generate** and **use 'results'** information that supports the government's management agenda from the perspective of both **'learning**' and '**accountability**' in the **design** and **delivery** of government policies, programs and services and the use of public funds.
- This is supported by provisions related to planning under articles 10, 56, 174, 195, 201, 203, and 225, 226, 227 of the Kenyan Constitution.

Sanitation M & E in Kenya

- Monitoring activities are often conducted by a range of different actors within government,

- The sources of data and the methods of producing national estimates often vary within the country between the different agencies

- A lack of coordination & Harmonization and the use of different approaches, can **result in duplication of efforts and contradictions**

Why are there different estimates in Sanitation?

- Different sources of data
- Different methods of calculation
- Different data providers.
- Different definitions for improved/unimproved.
- Different additional criteria to qualify access.
- Different categories/denominations used.
- Different definitions of urban/rural.

Gaps to be addressed

- Monitoring of Sanitation activities is done by different sector and agencies
- The fact that national sectors/ agencies use different definitions results in different estimates.
- Lack of hand-washing questions in health sector monitoring and national bureau of statistics

Ways of Strengthening M & E

- Develop/ Revise or reinforce existing national policy and institutional frameworks to ensure effective coordination between different institutions
- Harmonize the indicators used in the country
- Automation of the Sanitation indicators
- Ensure regular data updating and sharing between the actors involved in monitoring at national level, and with the JMP.
- Train/Capacity build Sanitation M & E officers

Ways of Strengthening M & E

- Compare routine data and census data.
- Examine the gap between the availability of the actual infrastructure and usage.
- Encourage exchanges between the different stakeholders in charge of monitoring.
- Carry out research in sanitation monitoring and evaluation

Kenya National sanitation coverage- 2014 JMP

IMPROVED	SHARED	UN-IMPROVED	OPEN DEFECATION
30%	**26%**	**31%**	**13%**

Improved + Shared + Un-improved = **87%**

Improved + Shared = 56%

Conclusion

- There is need to collate and use the existing secondary data and research to inform policy in the Sanitation sectors.
- The need to harmonise the categorisation of improved/unimproved infrastructure between KNBS, Ministry of devolution and sector ministries, clarify the different definitions of access/coverage and make the definitions of urban/rural correspond with each other. It is also essential to make national and JMP definitions correspond.

THANK YOU

DESIGNING AND TESTING A COST-EFFECTIVE SANITATION AND HYGIENE INTERVENTION TO IMPROVE THE HEALTH OF VULNERABLE CHILDREN (<36 MONTHS) IN SLUMS OF KISUMU

A collaborative Research

Presented by
Jane Mumma

Collaborating Partners

PI: GLUK
Co-PIs: MOH National, Kisumu County public health officers, LSTMH
Collaborators: Community, CHEWs, CHVs, KEMRI, ICDDR, UNICEF, CDC,

Research Issues of interest

A cost effective sanitation approach in informal urban settlements (slums)

1. Coverage and usage (Universality)
2. Contamination of food and water
3. Nutritional status
4. Oral vaccines

The actual research questions will be developed and refined by the partners listed above.

Coverage

1. No model for universal access:
   - Shared compound
   - Shared toilet (May not be equitably available to the members; insecurity issues at night)
2. Gender- women are more vulnerable
3. Landlord-tenant responsibility to provide and to maintain

What approach of total sanitation would be acceptable in the slum conditions

Interested in participatory approach in developing this model for access for all

Overview

Food Contamination and hygiene-linked to diarrhea

1.What are the pathogen pathways?
For intervention

2.Absentee of the real caretaker, mother, replaced by an caretaker. What model or mechanisms would ensure competent caretaking as far as hygiene of weaning foods preparation, storage and feeding

Nutrition Status

Malnutrition is a major problem in the slums- what is the contribution of sanitation And hygiene to malnutrition?

Design a study to deal with sanitation and hygiene issues at the hh and find out if malnutrition and by how much

Feeding

Feeding after the episode to catch up (Links to objective 2; Zinc, micro-nutrition etc.)

Influence of sanitation and hygiene on effectiveness of oral vaccines

Does sanitation and hygiene reduce the effectiveness of oral vaccines? E.g. polio and Rota virus? Does enteric infections influence uptake of oral vaccines