Innovative Tools for Sanitation Capacity Mapping and Planning in Kenya

April 2015

Lack of capacity is a major bottleneck that hinders progress in achieving access to sanitation. The Water and Sanitation Program (WSP) has developed and tested a set of practical tools designed to support clients at the local level as they plan, build and sustain sanitation capacity.

BACKGROUND

Progress in sanitation has been slow and most countries in Sub-Saharan Africa have not met the Millennium Development Goal (MDG) of halving the number of people without access to sanitation. A substantial step change in the rate of sanitation access is required if the Sustainable Development Goals (SDGs) of eliminating open defecation and securing universal access to sanitation by 2030 are to be met.

Since 2008, various diagnostics have identified sanitation capacity as a significant contributing factor to a lack of progress in the sanitation sector[1]. Governments have struggled to fulfill commitments to build and strengthen sanitation capacity made through processes such as AfricaSan and the Sanitation and Water for All High-Level Dialogue.

Sanitation capacity means having sufficient numbers of skilled personnel in place to implement planned sanitation activities, and ensuring that the personnel are working within a functional system, with the financial and material resources to carry out their role effectively.

In 2011, capacity building was among the most frequently cited sanitation priority actions identified by countries preparing to participate at the AfricaSan 3 Conference. Following the conference, these priority actions were taken forward through priority action plans for sanitation in 30 countries.

KEY FINDINGS

- **The capacity mapping and planning tools used in five counties can be used in other counties.** In most counties, a lack of sanitation capacity planning is a significant bottleneck to progress. There is limited clarity on capacity issues such as shortage of staff or skills deficits and very few examples of strategic review of sanitation capacity taking place to plan and budget for staff. This simple and effective tool for planning staff allocation and capacity development based on priorities and needs would therefore be useful across counties.

- **The tools can be used in other countries where increased capacity to implement sanitation interventions is needed.** In recent years, many countries across Africa have adopted sanitation behaviour change approaches such as the community-led total sanitation (CLTS) approach used in Kenya. These approaches demand significant interaction between sanitation staff and communities over a number of weeks and therefore require a large number of trained staff. There is therefore considerable scope for the tools developed in Kenya to be applied in other countries.

- **The capacity mapping and planning tools could be adapted to other sectors.** In Kenya, several other outreach-based sectors such as agriculture have devolved to counties. A similar type of capacity mapping and planning against sector targets would have value. The tools developed for sanitation could be easily adapted for other sectors.

[1] AMCOW, AfDB, World Bank, WSP. 2008. Can Africa Afford to Miss the Sanitation MDG Target? A Review of the Sanitation and Hygiene Status in 32 Countries; UN-Water Global Annual Assessment of Sanitation and Drinking-water. 2010-2014.; AMCOW eThekwini Commitments Monitoring 2013.

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FIGURE 1: COUNTRY SANITATION PRIORITIES ACROSS AFRICA (AFRICASAN3)

By 2013, despite this focus on capacity building as a key priority action for sanitation, the monitoring of the eThekwini Commitments for Sanitation still found that *"building and strengthening sanitation capacity"* was one of the more poorly performing commitments on average. In 2014, countries reporting to UN-Water GLAAS noted insufficient staff, especially in rural areas, as a significant constraint to sector progress.

Despite noting lack of capacity as a bottleneck, less than half of countries reported that they had a WASH human resources strategy in place[2].

Having adequate capacity is central to the ability of governments and partners to meet sanitation targets and realise the economic gains associated with improving sanitation. Progress seen in defining institutional arrangements, and developing sector policies and approaches will ultimately only lead to on-the-ground improvement in sanitation status if plans include sustainable provision of appropriately skilled personnel at the local level to implement sanitation activities.

BOX 1: PLANNED SANITATION CAPACITY IN ETHIOPIA

In Ethiopia, the national Health Extension Program is supported by over 30,000 Health Extension Workers at village level. With a 55% reduction in open defecation between 1990 and 2012, Ethiopia has seen the highest reduction in open defecation globally, way above the 11% regional average reduction over the same period.[3] The Government of Ethiopia's commitment to resource the program with trained and paid human resource capacity at local level has undoubtedly been a significant contributing factor to Ethiopia's results.

CAPACITY DEVELOPMENT FRAMEWORK

Capacity building is often viewed only in terms of staff training or human resources. However, a more comprehensive framework considers capacity development on three levels: developing a supportive enabling environment consistent with achieving sanitation goals; building the capacity of institutions to ensure that systems and procedures are in place; and building capacity of individuals to carry out their own roles. Within this framework, the capacity at each level needs to be addressed by cohesive, comprehensive and results-oriented sector plans.

FIGURE 2: CONCEPTUAL FRAMEWORK FOR CAPACITY BUILDING[4]

[2] UN-Water global analysis and assessment of sanitation and drinking water (GLAAS) 2014. Summary PowerPoint presentation. **Investing in water and sanitation: increasing access, reducing equalities.** WHO.

[3] WHO and UNICEF Joint Monitoring Programme (2014). **Progress on Drinking Water and Sanitation Update 2014.**

[4] Framework adapted from Spuhler D., McCreay C.,Fogde M., Jenssen P. (2012). **Capacity Development for Sustainable Sanitation.** Sustainable Sanitation Alliance Factsheet.

SANITATION CAPACITY IN KENYA

Applying the same conceptual framework to sanitation capacity building in Kenya, at the national level the **enabling environment** is well-formulated; there is a clear lead department for sanitation; a dedicated WASH unit; and a well-established inter-sectoral coordinating committee (ICC) with a wide membership. There is also clarity on direction for sanitation; a review of the current policy to align it with the Constitution is nearing completion; and the national programmatic approach and Open Defecation Free (ODF) targets are well-established.

Since counties have been established relatively recently (2013), at the **institutional** level, the operational environment in terms of county systems, procedures and policies are for the most part still under development. A few counties have developed needs-based, budgeted plans for sanitation. However, securing ring-fenced *financing* for sanitation activities from inchoate county budgets is a constraint across counties.

BOX 2: DEVOLUTION AND SANITATION IN KENYA

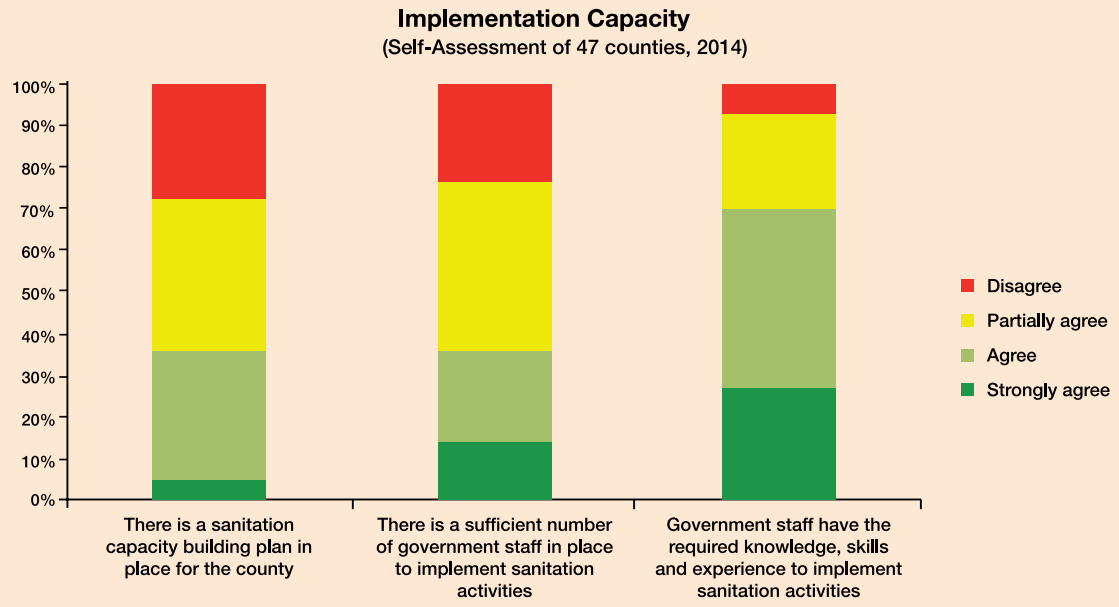
The promulgation of the Constitution of Kenya, 2010 made access to reasonable standards of sanitation a basic human right. The ensuing process of devolution created 47 county governments constitutionally mandated to take responsibility for sanitation service provision.

Whilst sanitation staff shortages undoubtedly exist, inadequate human resource planning and allocation within counties and sub-counties also creates inefficiencies. Rationalising and planning staff based on priorities and needs would maximise sanitation results with the limited capacity available.

Past capacity development initiatives have tended to run parallel to sector work plans and budgets and therefore have not always provided new capacity that can be effectively and sustainably channeled for results[5]. A reliance on classroom-based, and often development partner-funded, capacity building approaches outside sector work plans has not kept pace with need. When large numbers of staff are to be trained, classroom-based trainings have a number of drawbacks; they are slow to roll out, remove staff from their duty stations and are comparatively costly. Capacity building initiatives that are not embedded within county sanitation plans, budgets and targets produce skills without the necessary resources to use them.

The creation of the 47 autonomous counties in 2013 has substantively changed the role and therefore the **individual capacity** needs of public health staff in Kenya. This is particularly the case for county and sub-county public health officers who had an essentially technical role prior to devolution, but have now assumed full responsibility for planning and resource mobilisation, monitoring, reporting and performance management – all of which require specific skills to be built.

FIGURE 3: IMPLEMENTATION CAPACITY



[5] MoH and WSP, 2014. Capacity Mapping for Rural Sanitation in Kenya. Report 2014.

The national adoption of the relatively new CLTS approach, which is as yet not included in standard diploma curricula, has required large-scale staff training. Kenya's ODF roadmap planned for the training of 3,000 public health officers (PHOs) and public health technicians (PHTs), plus over 40,000 community health volunteers (CHVs) and community consultants. Entrenching new skills and functional competencies will also require follow-up, support and opportunities for staff learning exchange.

All of the 47 counties in Kenya undertook a self-assessment of the enabling environment for sanitation in early 2014. This process highlighted shortfalls in sanitation capacity in terms of planning, staff numbers and to a lesser extent staff knowledge, skills and experience (see Figure 3). Having a sanitation capacity building plan in place for the county was one of the lowest ranking enabling environment indicators across counties, despite it being fundamental to sanitation scale-up towards attaining ambitious county targets.

SANITATION MAPPING TOOLS AND INNOVATIONS DEVELOPED

In response to the recognised weakness in sanitation capacity planning at the county level, WSP has developed and tested a set of tools designed to help county and sub-county PHOs systematically identify and analyse capacity problems and search for innovative and workable solutions. The tools take teams through a process of physically mapping sanitation needs and overlaying this information with existing sanitation capacity. As a result, capacity shortages and gaps are identified against needs, allowing teams to plan short, medium and long-term solutions.

Staff skills inventory

As a starting point for the process, county and sub-county sanitation management teams create an inventory of all professional staff (those on the county government payroll) working on sanitation. This staff list includes PHOs, PHTs and community health extension workers (CHEW). Each staff member is named and information regarding their individual capacity in terms of knowledge, skills and experience relevant to their sanitation function is collected. Information sought is categorised according to the list in Table 1 compiled from national capacity mapping and other sector references as well as local sanitation approaches and targets.

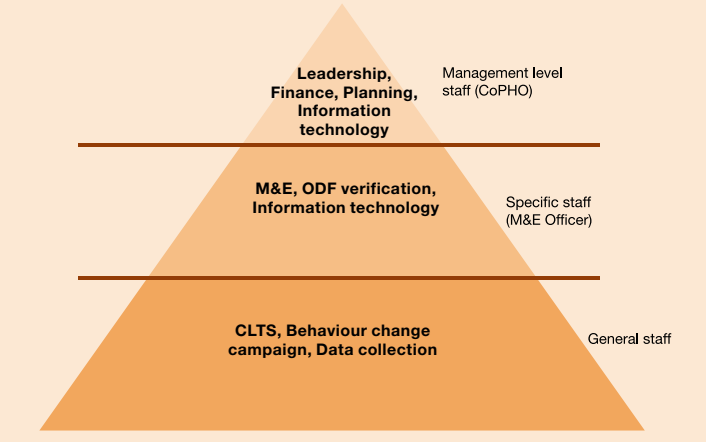
Skills needs assessment

Once the staff inventory is complete, the PHO team refers to the county sanitation plan or ODF roadmap as a basis for discussing and prioritising the skills and experience mix required within the team to meet goals. A rational approach is used which differentiates positions and matches skills requirements to roles for each cadre of staff. This process can seem counter-intuitive to some participants, for example managers can feel that they must have all skills first in order to oversee staff members using those skills. However, systematically separating the "essential-to-know" from the "nice-to-know" is the beginnings of establishing a cost-effectiveness driven approach to capacity building. A typical final list in a county with high open defecation rates and predominantly rural population would include CLTS facilitation skills, monitoring and evaluation (M&E), information technology (IT) and management.

TABLE 1

Location / coverage	Prior to devolution, PHOs in urban and rural areas had separate reporting lines, with urban PHOs reporting to the Public Health Department of the Ministry of Local Authorities and rural PHOs reporting to the Chief PHO in the Ministry of Health through the Provincial PHO. In the county structure, all public health officers fall under the County Public Health Officer and the county government.
Designation and educational level	The job title and education level – certificate, diploma, degree, master's degree – of each staff member. In most cases there is no difference in role played between PHOs and PHTs.
Training	The inventory captures trainings that have been undertaken either through the line ministry, the county, privately or through partners. Trainings considered include both sanitation specific skills (such as CLTS facilitation) and role-related skills (such as management).
Experience	In line with county targets and program approach, the inventory captures the level of experience in hands-on CLTS experience through the number of villages triggered.

FIGURE 4: COUNTY SANITATION CAPACITY REQUIREMENTS



Capacity mapping

The capacity mapping process is designed to provoke discussion about, and identify solutions to, capacity shortages and gaps that are hindering sanitation progress. As a starting point, a "background map" is created onto a county map template. Sanitation-related health burden is mapped including areas that experience high diarrhoeal rates and flash points for outbreaks such as cholera.

Urban centres, major landmarks and hard-to-reach areas are then identified. Finally, high open defecation villages are marked on the background map.

The background map is then overlaid with staff working locations, and coded to show skills and experience (see photo 1 below).

The process of physically mapping out the health and sanitation situation versus location, skills and experience allows weaknesses and inconsistencies in staff coverage to be highlighted and to start discussions as to how shortfalls in staff and skills could be covered.

Target planning estimates

As in other sectors, there is a tendency to view recruitment of additional staff as the solution to capacity challenges. In Kenya it is unlikely that most county governments will approve additional posts in the short to medium term. A fourth tool is used, which is designed to start the process of thinking "outside of the box" for solutions to sanitation capacity challenges.

The exercise is a simple back-of-an-envelope calculation using standard intervention parameters, which the participants define themselves (e.g. one PHO can cover a maximum of five villages at any time, and each village requires three months of follow-up from triggering to ODF declaration). The parameters are applied to sub-county ODF profiles and targets in order to estimate the number of months to an ODF sub-county under optimum conditions.

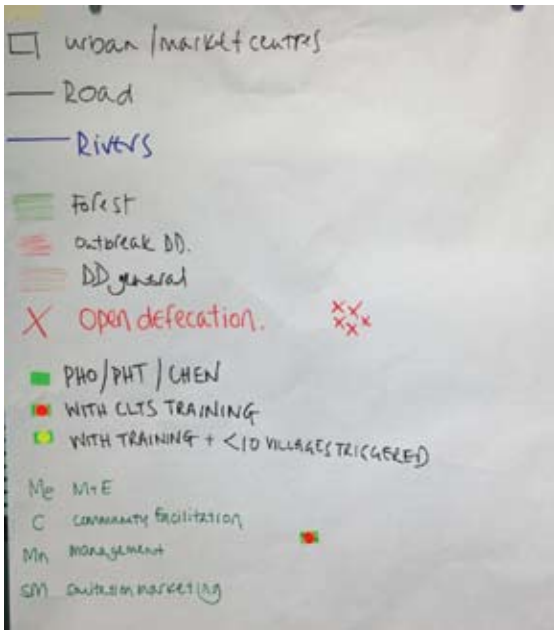


Photo 1: Capacity map key

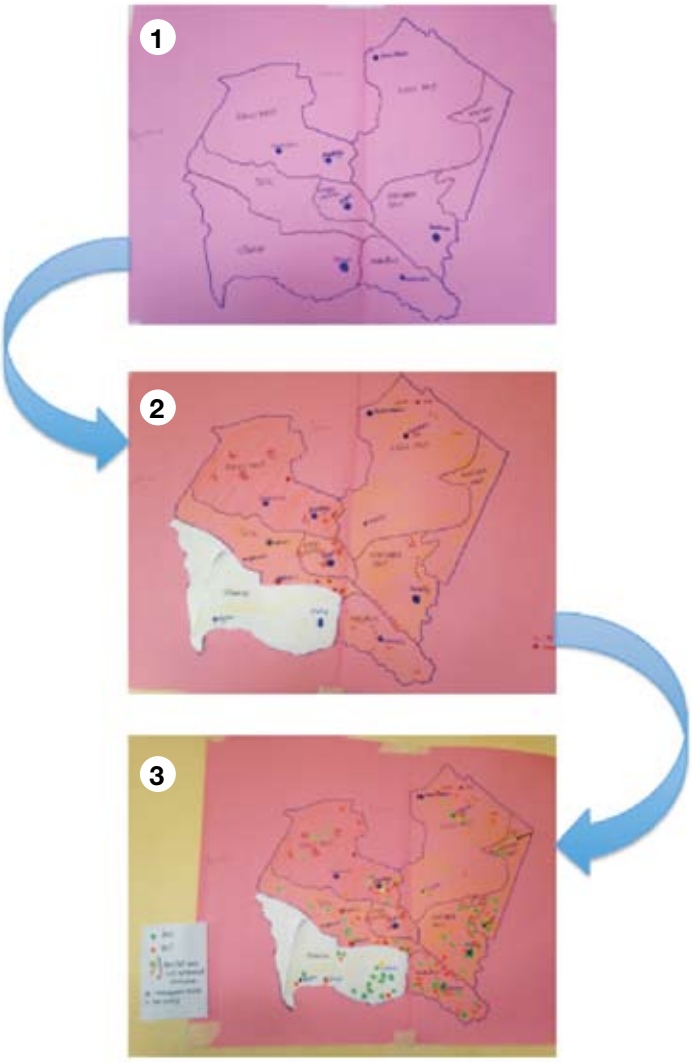


Photo 2: Building the map (Nyeri)
1) County outline
2) Health and sanitation status
3) Staff capacity and location

The calculations can be adapted to make estimates based on having all staff or only rural staff working on CLTS, as well as extending or shortening the length of time from triggering to ODF to estimate best case and worst case scenarios.

In one county, the five sub-counties estimated that reaching ODF would take between six and 15 months, a timeframe well within their ODF 2017 target.

Action prioritization and time bound capacity development action planning

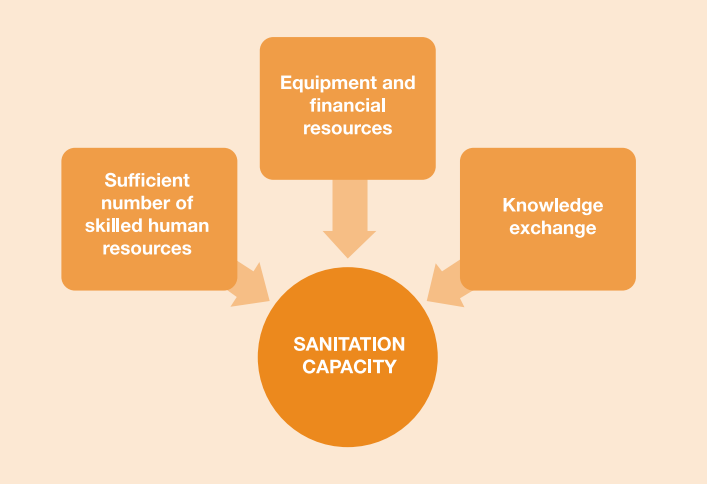
As a final step, the team brainstorms actions that could be used to address the capacity challenges identified; participants are encouraged to think innovatively, listing all ideas in the first instance. Once all ideas are listed, actions are prioritised (with some being thrown out) and compiled into an action plan of short, medium and long-term activities, with assigned responsibilities for completion.

LESSONS FROM THE FIVE COUNTIES

Capacity development needs to be viewed as a planned and continuous process of acquiring, using and sharing new skills

Capacity development goes beyond hiring and training of staff. It encompasses making sure that those staff are working within a functional system and have the financial and material resources to carry out their role effectively. Beyond training, capacity is built through knowledge exchange to reinforce and deepen new skills and experiences. At the county level, these three aspects of growing and maintaining sanitation capacity need to be established and balanced by defining a clear sanitation capacity development plan that is well-aligned with county sanitation targets and embedded within financed work plans.

FIGURE 5: ASPECTS OF SANITATION CAPACITY



Visualisation of capacity gaps and shortages stimulates ideas: Whilst the outcome of the capacity mapping and planning in each county was unique, there was a shared appreciation of the simplicity and effectiveness of the approach in visualising the issues and using that understanding to guide the innovative thinking required to identify practical and workable solutions to capacity challenges.

Capacity mapping helps to dissect sanitation targets to enable better planning of resources

The national ODF roadmap creates political will to prioritise sanitation activities. Staff members at all levels have ODF targets set within their performance targets which dovetail upwards to county targets. However, communities are not homogeneous and staff in high open defecation areas often end up with annual ODF targets that are not attainable with their current resources. The mapping exercise highlights this issue by overlaying high open defecation and low staff coverage areas. The subsequent focus on the visual evidence and the overall goal of attaining county targets helps move discussions beyond existing team dynamics (for example, reluctance to move staff) to find the solutions needed to meet targets.

Redistribution of staff can accelerate results and increase equity: In Kajiado West, the existing 11 staff will take 15 months to deliver all remaining villages ODF. With more staff and less OD villages, Kajiado East could meet ODF targets within 6 months. The team discussed the scope for staff redistribution to close the gap between sub-counties.

Visualising the urban bias in staff allocation helps innovative thinking

In every county, a significant urban bias of staff was seen on the maps. In some instances, this is a reflection of the recent history of having different reporting lines for urban and rural PHOs. Pre-devolution urban PHOs reported to the Public Health Department of the Ministry of Local Authorities and rural PHOs reported to the Chief PHO in the Ministry of Health through the Provincial PHO. In other cases, this is due to a staff preference for urban postings rather than rural postings, which are often considered as 'hardship postings'. This situation is not unique to Kenya – according to the 2014 GLAAS report, skilled workers not wanting to live and work in rural areas is a key issue constraining human resource capacity in the WASH sector.[6]

[6]UN-Water Global Analysis and Assessment of Sanitation and Drinking water (GLAAS) 2014 report. Investing in Water and Sanitation: Increasing Access, Reducing Equalities. WHO.

Note: The other top constraining factor for WASH human resource capacity is financial resources for salaries and benefits.

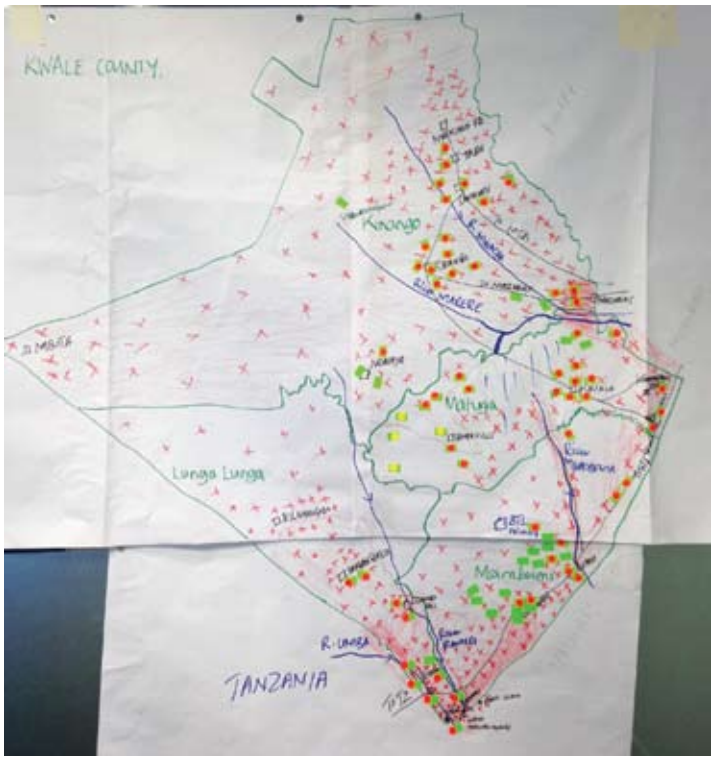


Photo 3: Kwale County Sanitation Capacity Map
"..it makes you want to tip the map up and shake the staff to where they are needed!" – *Kwale mapping participant*

Visualising this clear urban bias on a map provokes innovative thinking on how to make sure that limited human resources are reaching the communities most in need. Examples include reassigning urban-based staff to rural areas, temporary roster-based assignment to rural areas, mobilising the budget for hardship posting allowances, and recruiting university interns to work in hard-to-reach locations.

Mapping existing skills and experience can be used as the basis for planning effective mentoring and knowledge exchange initiatives

Mapping staff skills and experience as well as locations helps identify destinations for learning exchange visits (where capacity has translated into results) and staff who are potentially available for mentorship initiatives (those with extensive experience). Structured learning exchange and mentorship initiatives are a valuable way of transferring skills, leveraging and combining individual's knowledge to find new solutions and improve results. In practical terms, knowledge exchange can be relatively low-cost and can be implemented according to county work plans and schedules unlike classroom-based training programs.

Peer Coaching: In Busia County, on-the-job training is being implemented to share CLTS skills with those who have not yet received formal training. New team-members job-shadow trained team-members for a week and experience triggering and follow-up sessions, after which they are able to return to their work areas and produce results without having received official training.

Peer Mentoring: Nyando sub-county has attained ODF status and PHO staff have entered a less intensive phase of sustaining results. Nyando also has a high density of experienced CLTS facilitators. By contrast, neighbouring Muhoroni sub-county still has areas with significant open defecation problems which are covered by staff who are as yet inexperienced in CLTS facilitation. Nyando PHOs are therefore a pool of expertise able to provide mentorship support and learning exchange across sub-county boundaries.

Having a needs-based capacity development plan helps to mobilise resources for sanitation

Using the mapping exercise to develop a capacity development plan based on needs and oriented to achieving county sanitation targets helps counties to mobilise resources for sanitation. Being able to clearly articulate the achievable results of addressing a specific capacity need is a convincing argument for county budget-holders and development partners.

Securing resource commitments: In Kwale, the mapping exercise identified critical capacity shortages in the eastern part of the county, which is difficult to access and is considered a hardship area. The exercise also highlighted that, since this area had a high number of OD villages, county sanitation targets could not be met until the situation was addressed. The County PHO used this analysis to secure a commitment for weekly transport arrangements from an existing development partner.

Mapping capacity gaps against staff roles promotes cost-effectiveness

Systematically matching staff roles and responsibilities to skills requirements streamlines the overall capacity building plan to ensure that activities are prioritised and targeted according to results.

CONCLUSION: FUTURE APPLICATION OF THE TOOLS

The set of tools for sanitation capacity mapping and planning have been tested in five counties in Kenya, allowing the team to make modifications to improve both process and results with feedback from county public health teams.

In Kenya, a lack of sanitation capacity planning is a significant bottleneck to progress. There is limited clarity of capacity gaps and shortages and how they can be addressed strategically and cost-effectively through needs-based planning and budgeting. It is likely that the need for a simple and effective tool for rationalising and planning staff based on priorities and needs would resonate across counties. If this is the case, a guidance package could be developed for county-led facilitation of the capacity mapping and planning process.

Kenya is unique in that the government has recently devolved. However, many other countries in the region use similar sanitation implementation approaches such as CLTS which require a high level of interaction between staff and communities over a number of weeks and therefore demand large numbers of trained staff. For example, a 2014 national sanitation capacity mapping exercise in Uganda found similar capacity issues in terms of a lack of overall capacity development planning and uneven geographic coverage of staff. Consequently, there is considerable scope for the tools developed in Kenya to be applied in other countries.

Sanitation approaches such as CLTS involve significant community outreach work and public sector staff are therefore required to be based in, or travel extensively to rural locations. In Kenya, where other outreach-based sectors such as agriculture have devolved to counties, a similar type of capacity mapping and planning against sector targets would have value. The tools developed for sanitation could be easily adapted for other sectors.

The Water and Sanitation Program is a multi-donor partnership, part of the World Bank Group's Water Global Practice, supporting poor people in obtaining affordable, safe, and sustainable access to water and sanitation services. WSP's donors include Australia, Austria, Denmark, Finland, France, the Bill & Melinda Gates Foundation, Luxembourg, Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States, and the World Bank.

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About the project

Global Scaling Up Sanitation is a Water Global Practice project focused on learning how to combine the approaches of Community-Led Total Sanitation (CLTS), behavior change communications, and social marketing of sanitation to generate sanitation demand and strengthen the supply of sanitation products and services at scale, leading to improved health for people in rural areas. It is a large-scale effort to meet the basic sanitation needs of the rural poor who do not currently have access to safe and hygienic sanitation.

The project is being implemented by local and national governments with technical support from Water Global Practice. For more information, please visit *www.wsp.org/scalingupsanitation.*

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