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AFRICAN SANITATION ACADEMY: MARKET AND FEASIBILITY STUDY IN EAST AFRICA

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Project Title: Water for Africa through Leadership and Institutional Support (WALIS)

Sponsoring USAID Office: Bureau for Africa's Office of Sustainable Development

Contract Number: AID-OAA-I-14-00049

Task Order Number: AID-OAA-TO-15-00034

Period of Performance: September 25, 2015–September 24, 2020

Contracting Officer: Jamie Raile

Contracting Officer's Representative: Amanda Robertson

Ceiling Price: \$12,383,704

Obligated Amount: \$7,900,000

Contractor: DAI Global, LLC

Date of Publication: November 2017

Authors: Yolande Coombes and Sophie Hickling

Editors: Richard Rapier and Anahit Gevorgyan

Images: Clare McEvoy/Trocaire ([Flickr](#))

Submitted by:

Richard Rapier, Chief of Party

WALIS

DAI Global, LLC

7600 Wisconsin Ave, Suite 200

Bethesda, MD, 20814, USA

richard_rapier@walis.org

Telephone: 301-771-7600

www.dai.com

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FOREWORD

Despite a growing body of evidence of the economic, health, social, and political impacts of fecally contaminated environments, sanitation remains a neglected service in Africa. There is chronic under-investment in sanitation infrastructure and management, and a general lack of strategic approaches for addressing sanitation on an area-wide or larger scale; lack of prioritization of preventive health by Ministries of Health; and lack of political leadership to address the sanitary revolution that could improve the lives of approximately 644 million Africans lacking sanitation.¹

The United Nations designated a sanitation-specific global goal in Sustainable Development Goal (SDG) 6.2.² There is consensus among the sanitation expert community that achieving progress against these ambitious goals will require significantly more effective institutions and leadership.³ Leadership in the sub-sector is critical to overcome structural impediments (policy, legal, financial) and to make the significant and often difficult decisions needed to trigger the transformation of sanitation in Africa.

The USAID Water for Africa through Leadership and Institutional Support (WALIS) project⁴ studied the feasibility of a sanitation training center with an Africa continent focus, commonly called the “African Sanitation Academy” (ASA).⁵ WALIS commissioned three regional ASA market assessment and feasibility studies in eastern, western, and southern Africa. Each study was meant to:

- Assess existing government frameworks and how local governments and sanitation providers are strengthening sanitation management and leadership.
- Analyze the demands of African utilities and governments for sanitation management.
- Identify what educational institutions are researching and/or teaching relevant to sanitation.
- Explore potential partnerships that should be developed and how they should be structured.
- Consider products appropriate to meet these demands.
- Examine what type of organizational framework would best suit ASA and how it should be financed, and the overall feasibility of the concept.

A feasibility report, summarizing the findings of individual regional studies was produced, addressing demand, products, costs, organizational partnerships, and financing. The findings of these studies will be used to seek financial and technical support from a range of prospective ASA investors and partners. This regional feasibility study focused on identifying and unpacking the target market, as well as current training and initiatives in East Africa. Its aim was to envisage an ASA and recommend models for its establishment based on the demand for and supply of relevant training in East Africa.

¹ World Health Organization (WHO)/United Nations International Children’s Emergency Fund (UNICEF). (2012).

² By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.

³ For example, Gordon, B. (2016). *Lessons learnt from the MDG period in water and sanitation*.

⁴ WALIS aims to support national and regional institutions and their development partners to improve the capacity of African water sectors to implement policies, strategies, and plans that will deliver sustainable water, sanitation, and hygiene services consistent with the SDGs.

⁵ The term “academy” refers to an institution of higher learning, not in itself as extensive as a university, but one that draws together specialist expertise, gives its members the opportunity for in-depth learning, promotes analysis and the exchange of ideas, and encourages innovation. This distinguishes it from “training,” in which skills are improved according to established bodies of knowledge through courses or training modules.

ACKNOWLEDGMENTS

The authors of this document and the WALIS team would like to thank all interviewees for their valuable insights and information that made this report possible. A full list of names is available in Annex A.

ABBREVIATIONS AND ACRONYMS

AMCOW	African Ministers' Council on Water
APHOK	Association of Public Health Officers of Kenya
ASA	African Sanitation Academy
CDC	Centers for Disease Control and Prevention
CLTS	community-led total sanitation
CPD	continuous professional development
EAWAG	Swiss Federal Institute of Aquatic Science and Technology
GLAAS	Global Analysis and Assessment of Sanitation and Drinking-Water
HR	human resources
IAF	International Accreditation Forum
IHE Delft	IHE Delft Institute for Water Education
IWA	International Water Association
JMP	Joint Monitoring Programme
KII	key informant interview
KMTC	Kenya Medical Training College
M&E	monitoring and evaluation
MDG	Millennium Development Goal
MISM	master's degree in integrated sanitation management
MOOC	Massive Open Online Course
MOH	Ministry of Health
MOU	memorandum of understanding
NETWAS	Network for Water and Sanitation International
NGO	nongovernmental organization
NWSC	National Water and Sewerage Company
PHFP	Public Health Fellowship Program
PHO	public health officer
SDG	Sustainable Development Goal
SWA	Sanitation and Water for All
UNICEF	United Nations International Children's Emergency Fund
WALIS	Water for Africa through Leadership and Institutional Support
WASH	water, sanitation, and hygiene

WEDC	Water, Engineering, and Development Centre (University of Loughborough, UK)
WHO	World Health Organization
WRI	Water Resources Institute
WRM	water resources management
WSP	Water and Sanitation Program

SUMMARY

There are still many people who do not have access to improved sanitation and hygiene facilities or services in East Africa. For cities and other areas throughout the region, a lack of core country systems for sanitation, and a weak enabling environment, means that the building blocks for sanitation management and leadership are absent. To make the situation more challenging, targeting and implementation of sanitation improvements are clearly not meeting the needs of lower-income areas. Tackling the problem of pro-poor urban sanitation requires vision and innovation, which are strongly linked to the capacity of staff within utilities and municipalities.

The feasibility study examined various models for leadership development both inside and outside the sanitation sector. Leaders do not necessarily need a technical background, because they can gather the necessary technical skills from their team. What they do need is vision and the ability to inspire and develop a strategy to be executed. However, there is another level of leaders, whose skills can be acquired through classroom-based learning and consolidated in the field. It is these leaders who are needed to ensure that implementation efforts are maximized and efficient in the region's sanitation sector.

The models and approaches examined include more traditional face-to-face training through to approaches that capitalize on technology. What is apparent in the feedback from key informants is that there is no “one-size-fits-all” approach. Their feedback pointed to three top factors that influence leadership:

- **Experience:** Leadership comes not only from courses and training, but also from experience, learning-by-doing, working collaboratively, and exposure to good leadership examples.
- **Mentors:** Having an experienced mentor to show them the ropes, or encourage them to try new ideas and think outside of the box.
- **Communication:** The importance of having a voice, that being able to communicate effectively inside and outside the sector and be recognized has been a key aspect of becoming a leader.

Solutions to address these top three factors could include:

- **Short courses:** Several sanitation short courses are offered in the region by official institutions. Technical courses are also offered by overseas institutes and regional training institutions. There are several online courses in sanitation-related subjects available.
- **Online courses:** Online courses have the advantage of not being location specific, and are theoretically available to all. However, they also rely on internet connectivity, which can be problematic in some areas. As with other courses, the provision of a certificate of completion of an online course is likely to be important to trainees in the East Africa region. The quality of the issuing institution is also important; accreditation from a recognized institute raises the perceived “value” of an online course for some employers. Mobile technology not only allows peers to connect following training, but also allows them to connect if they are carrying out online training.
- **Fellowships and mentorships:** Although no sanitation-specific fellowships or mentorships have been identified, examples from other fields highlight the potential of such programs to address identified sanitation leadership development needs in East Africa by providing guided experience, links to mentors and peer networks, and teaching elements that include leadership skills. Mentors can

come from a different field or be senior specialists in the same field as the fellows. Fellowship programs can also link participants to an alumni network.

- **Knowledge exchange:** Knowledge exchange and peer-to-peer learning have been used in the region to help sanitation professionals learn from others in the field with similar experience. Many organizations are investing in knowledge exchange or South-South learning as a cost-effective approach to building capacity. The direct results from knowledge exchange can also influence results at the institutional and even systemic levels. Participants of successful knowledge exchanges are empowered and motivated to make things happen. They will seek to change the environment in which they operate, affect policies and norms that influence the way people behave, and strengthen the institutions where they work. All countries had some experience with knowledge exchange programs, and all were highly valued to learn and build capacity rapidly, especially when they were tailored to particular needs. Knowledge exchange activities allow for more self-directed learning, targeted in a short amount of time.

PROPOSED MODEL FOR THE ASA IN EAST AFRICA

On the whole, the sector lacks the required quantity and quality of leadership needed to catalyze service provision in pursuit of meeting SDG 6. Although technical training is sufficient, few organizations have the requisite structures and systems in place to build sanitation leadership. Given the complexity and interrelatedness of the issues, an Africa Sanitation Academy (ASA) needs to address not only the quality of the training and the need for practical experience and learning-by-doing, but also the issues of making a career in the sector more attractive. This can be done through a combination of mentoring and fellowships that encourages retention in the sector and peer-to-peer learning and knowledge exchange. It is this combination of prestigious mentors, up-to-date curriculum, practical experience, accreditation, and the opportunity to “join the club” that will in turn help to attract fee-paying clients (students). The aim is that within five years, ASA can be funded entirely through fees.

Recommendations for next steps include following up with key provider institutions that will be responsible for different components. The recommendation of this report is to establish ASA in Uganda, because there are already institutions and organizations that are willing to partner and can provide the necessary aspects of the course. It is advised that the recommended institutions be brought together in a joint meeting that could be facilitated by a consultant to iron out the roles and responsibilities and to finalize budgets and financing. However, a full-time course coordinator position would need to be funded for three to five years before transitioning that to the umbrella institution. One institution will need to take responsibility for “housing” and incubating ASA. This institution will need to have good governance, finance, and oversight.

BACKGROUND

INTRODUCTION

Clarity on institutional leadership in sanitation is especially lacking in fast-growing African cities where responsibility for sanitation is typically highly fragmented (sewerage, pit-latrines, pit-emptying services, treatment, and sanitation in schools and health facilities are often managed by several different entities). Lead public sector figures lack the knowledge and experience on how to move from this fragmented patchwork of services to a comprehensive, viable, citywide approach.

The evidence seems to suggest that the few sanitation-related success stories in Africa have depended on exceptional leadership by sanitation leaders. Despite many different initiatives, which are beginning to address aspects of the neglect and poor performance of sanitation services in Africa, there is no initiative that focuses exclusively on nurturing leadership to trigger change in overall sanitation performance.

The vision of the ASA is the emergence of a strong and distinct leadership for sanitation among utilities and local governments in Africa. Leadership that can achieve sustainable and safely managed sanitation and sewerage services that can contribute to Pan-African achievement of the SDGs. Leadership would generate the resources, policy insights, management systems, and customer care capacity to improve services, placing them on a path to be continuously upgraded to meet local demand.

This report is a detailed feasibility study of how ASA could operate in East Africa.

STUDY METHODOLOGY

Three feasibility studies covering East, West, and Southern Africa were undertaken in parallel. Each had a common goal, but each study's approach responded to the opportunities and context in each region.

The main purpose of each feasibility study was to assess the needs and demands of sanitation leadership and management in African utilities and local governments. The studies assessed current products that are either appropriate to meet these demands or have the potential to meet the needs. The study also addressed the overall feasibility of the ASA and, if viable, how it might be organized and sustained in East Africa.

REGIONAL AND COUNTRY FOCUS

The East Africa study was grounded in data collection across six countries in the region: Ethiopia, Kenya, Rwanda, Tanzania, Somalia, and Uganda. The aim was to conduct a regional analysis, grounded in an in-depth study of these countries. It was anticipated that locating or beginning a sanitation initiative in two or three such countries may have a greater likelihood of succeeding than generalizing across a diverse region. This approach was selected in no way to exclude leaders from other East African countries.

DATA GATHERING

Data collection for this study has mainly been qualitative in nature and has focused on the following:

- Skype and telephone key informant interviews (KIIs) for Rwanda, Ethiopia, Tanzania, and Somalia.
- Face-to-face KIIs with human resources (HR), Association of Public Health Officers, utilities, and municipalities in Kenya and Uganda.
- Focus group discussions with current students interested in a career in sanitation in Kenya and Uganda.
- Interviews with staff and alumni of Aspen New Voices Fellowship.
- Review of short courses, bachelor's degree courses, and master's degree courses in terms of content relevant to sanitation and leadership.

- Analysis of people’s CVs, qualifications, and career pathways, and compared these to job descriptions and advertisements.

A full list of the people interviewed can be found in Annex A; interview guides are presented in Annex B.

OVERVIEW OF SANITATION STATUS IN THE REGION

There are still many people who do not have access to improved sanitation services in East Africa. Generally, the rate of progress in increasing sanitation access has been poor over the past 25 years (see Annex F). There are disparities within the region, for example, rates of access in Ethiopia and Rwanda improved significantly over the Millennium Development Goal (MDG) period, but in Djibouti and Sudan access to improved sanitation decreased.⁶

When viewed in terms of state fragility, political and economic stability have been key to progress in the sector. More than half of the countries in East Africa are classified as fragile situations (see Annex E). As well as directly damaging sanitation infrastructure, conflict affects the capacity of core country systems to deliver basic services, including water, sanitation, and hygiene (WASH). A lack of core country systems for sanitation, and a weak enabling environment means that the building blocks for management and leadership are absent.

According to the World Bank, the proportion of Africans living in urban areas is projected to grow from 36 percent in 2010 to 50 percent by 2030.⁷ With rapid urbanization across the region, there is a risk that populations moving to informal settlements will be excluded from services. Most countries in the region have a WASH Universal Access policy that covers informal settlements.⁸ However, in 2012, of the six countries in the region that participated in the UN-Water Global Analysis and Assessment of Sanitation and Drinking-water (GLAAS) survey,⁹ only Rwanda had a fully implemented strategy for providing sanitation in urban informal settlements. Inequalities in access exist between different wealth groups. An analysis of access by wealth quintile shows that across all countries poorer people have less access to sanitation services in both urban and rural areas. Across the region, targeting and implementation are clearly not meeting the needs of the poorest, who end up being excluded. Tackling the problem of pro-poor urban sanitation requires vision and innovation, which are strongly linked to the capacity of staff within utilities and municipalities.

DEMAND FOR SANITATION LEADERSHIP

To mobilize the resources sanitation needs to meet the SDGs, it needs to be higher up in the political agenda. Leaders in the sector need to mobilize sufficient resources and finance and translate this into improved services that meet the needs of the poor and vulnerable to ensure universal access. However,

⁶ WHO/UNICEF. (2015). *Progress on sanitation and drinking water: 2015 update and MDG assessment*.

⁷ World Bank Group. (2015). *Urbanization in Africa: Trends, promises, and challenges*.

⁸ WHO. (2014). *UN-Water global analysis and assessment of sanitation and drinking-water (GLAAS) 2014 report—Investing in water and sanitation: Increasing access, reducing inequalities*.

⁹ GLAAS is a UN-Water initiative implemented by WHO. The objective of GLAAS is to provide policy and decision makers at all levels with a reliable, easily accessible, comprehensive, and global analysis of the investments and enabling environment to make informed decisions for sanitation, drinking-water, and hygiene.

there is insufficient leadership¹⁰ in the sanitation sector, which is compounded by a lack of political prioritization, robust institutional framework, and sanitation financing in most countries.¹¹ Figure 1 summarizes the interconnectedness of these issues and is used as a framework for analyzing the demand for better leadership in the next five sub-sections.

FIGURE 1: CYCLE OF GROWTH NEEDED IN THE SANITATION SECTOR



POLITICAL PRIORITIZATION OF SANITATION

The East Africa region has a relatively strong enabling environment for WASH compared to other regions in the continent,¹² but this has not been sufficient. Achievements in terms of policy, strategy, and institutional arrangements are the foundation for accelerating access to sanitation, but these achievements have not yet been translated into implementation and real progress as measured by access. Sanitation is still not adequately prioritized by governments; increased national wealth is not correlated with sanitation performance.

¹⁰ Throughout this document, we differentiate between “leaders” who are defined as staff in leadership positions who are leading; and “staff in leadership positions” who are staff that in theory should be leading, but in practice are not.

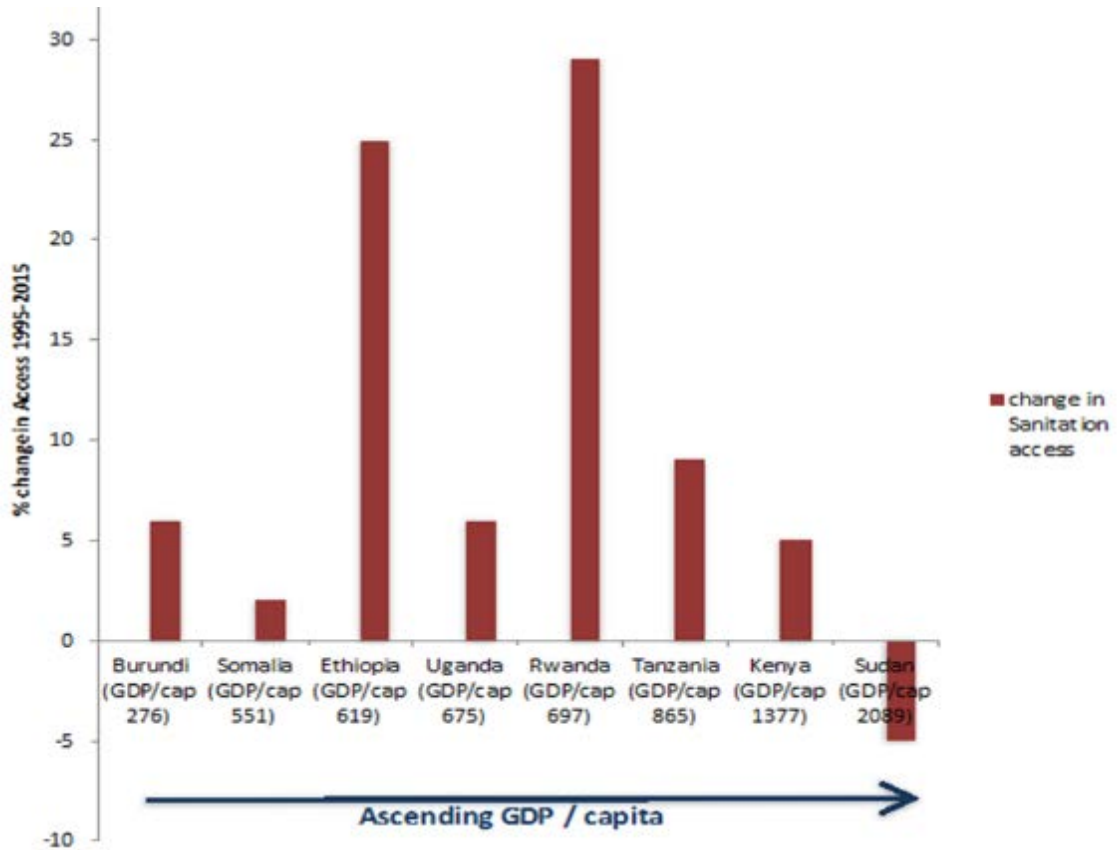
¹¹ Saywell, D., & de Vette, K. (2014). *An avoidable crisis: WASH human resources capacity gaps in 15 developing economies*.

¹² WASH Watch. (2017). *Country comparison: East and Southern Africa*; and Annex F for eThekweni monitoring scores.

MONEY FOR THE SANITATION SECTOR

Figure 2 shows the percentage change in access to sanitation over the period of the MDGs in order of ascending national GDP per capita. Interestingly, there seems to be no correlation between sanitation access and national wealth. Even where there is higher wealth, sanitation is not prioritized.

FIGURE 2: CHANGE IN WATER AND SANITATION ACCESS COMPARED TO NATIONAL GDP PER CAPITA*

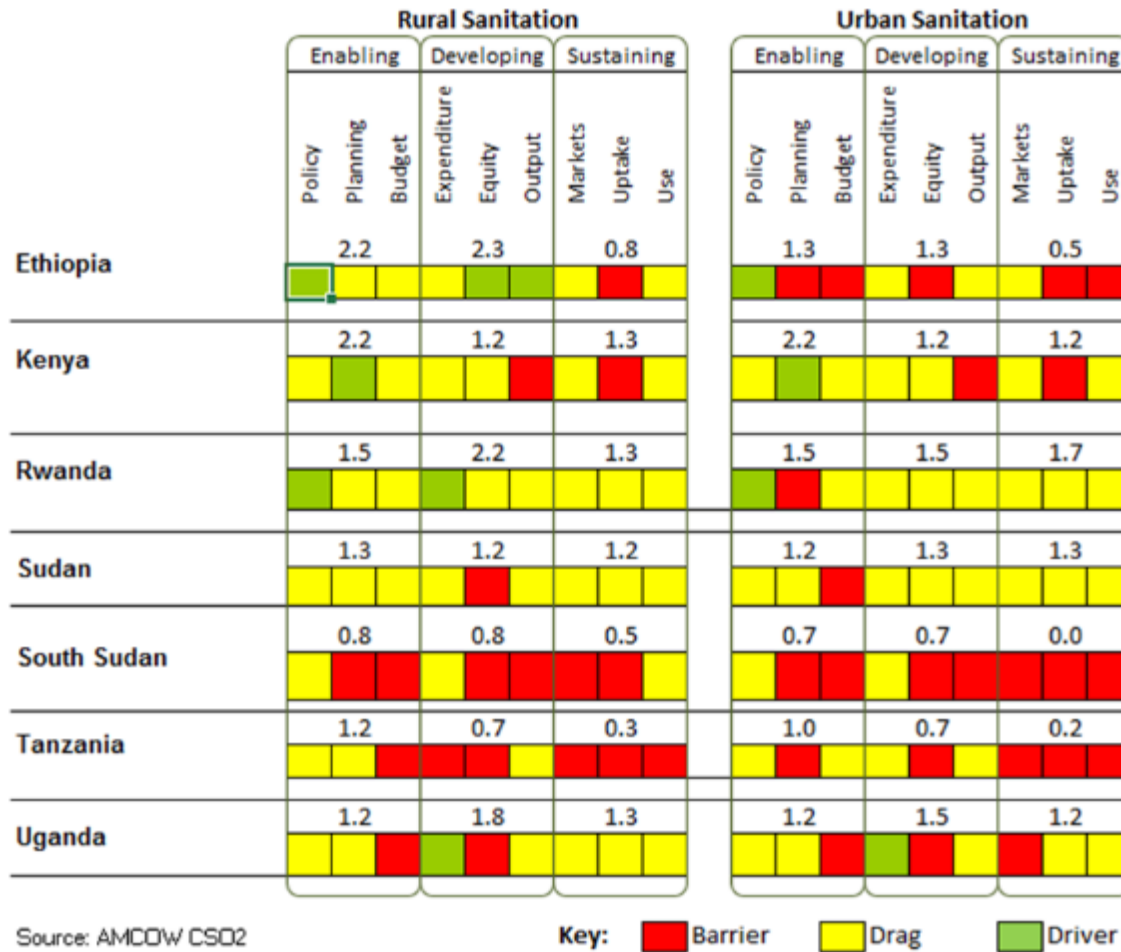


*Data sourced from World Bank Group, 2017.

Looking more closely at financial resources allocated to the sanitation service delivery pathway reveals that financial resources are not being effectively translated into sanitation services in East Africa. For both rural and urban sanitation, blockages appear all along the service pathway, indicating that considerable improvements are required to achieve sustainable services¹³ as shown by the African Ministers' Council on Water (AMCOW) Country Status Overview scorecards.

¹³ Green building blocks are those that are largely in place, acting as a driver on service delivery; yellow building blocks act as a drag on service delivery and require attention; and red building blocks are inadequate and constitute a barrier to service delivery and are a priority for reform.

FIGURE 3: AMCOW COUNTRY STATUS OVERVIEW SCORECARD (SELECTED COUNTRIES) IN EAST AFRICA



SECTOR FINANCING

According to the 2014 GLAAS report,¹⁴ no country in East Africa has sufficient funds to meet the SDG for sanitation, although Kenya and Rwanda have made some progress in securing adequate funding. Only Rwanda and Ethiopia have a government-agreed WASH financing plan. Most funds for WASH are allocated across other government departments such as urban development, planning, and education. Inadequate systems mean that current funding is not being utilized efficiently, which inhibits further investment.

¹⁴ WHO. (2014). *GLAAS 2014 report—Investing in water and sanitation: Increasing access, reducing inequalities*.

HR FINANCING

Financing for staff positions is key within the sector. A 2012 GLAAS study¹⁵ found that across water and sanitation, at all levels of staff, “insufficient budget to hire and retain staff” was viewed as the most limiting factor affecting HR. Financial resources are required to build a job-market for sanitation and adequate remuneration is needed to recruit and retain the best staff. Lack of financial allocation to sanitation and prioritization of infrastructure rather than staff positions restrict the growth of the sanitation job market.¹⁶

Example: Pathways to Sanitation Leadership in Kenya

In Kenya, recruitment for both utilities and government require specific qualifications. Utilities recruitment for senior positions seems to place more emphasis on merit and demonstration of leadership capabilities than for government sanitation jobs. Utilities list leadership skills and qualities in job advertisements and consider applicants from outside the sector if they meet the requirement for these transferable skills. In contrast, the government public health officer career pathway seems to place a greater emphasis on number of years of experience in the preceding job grade and completion of standard courses and less emphasis on the qualities of the individual.

TABLE 1: KEY INFORMANT INTERVIEW FEEDBACK ON SANITATION LEADER BACKGROUND

TECHNICAL BACKGROUND FOR LEADERSHIP POSTS		
COUNTRY	RURAL SANITATION	URBAN SANITATION
Ethiopia	Public health; environmental health; nursing; some non-technical	Engineering; some non-technical
Kenya	Environmental health	Engineering (civil engineer, water engineer); Environmental science
Rwanda	Environmental health	Engineering
Somalia	Health	Business
Tanzania	Environmental health	Engineering; Business
Uganda	Environmental health	Science; Engineering

JOB MARKET AND INCENTIVES

SANITATION CAREER PATHS

The technical background of a sanitation leader is largely dependent on the track by which they have become a leader. Respondents report that senior staff in utilities and municipalities have either an engineering background or business management background, whereas senior staff in government departments responsible for rural sanitation have a public health or environmental health background.

¹⁵ WHO. (2012).

¹⁶ Saywell, D., & de Vette, K. (2014). *An avoidable crisis: WASH human resources capacity gaps in 15 developing economies*.

There is recognition, however, that addressing sanitation, especially in urban contexts, requires a mix of professional skills.

“The pathway to sanitation has to be dynamic. We really need a mix of skills. As someone who works in a municipality I see that I need social scientists, behavioral scientists, IT, GIS, environmental scientists—it is not just sanitary engineers. Especially in municipalities where we are dealing so much with on-site sanitation. We need multidisciplinary teams—most of these other people coming in with different backgrounds are learning about sanitation.”

—Najib Lukooya, Kampala City Authority, Uganda

SANITATION RECRUITMENT

Most respondents agreed that the pathway for sanitation leadership needs some kind of technical foundation (although many have succeeded without it). However, they noted that some of the most important skills such as governance, ownership, getting a mandate, and financial management, are gained by on-the-job experience and from peer-to-peer learning. Many respondents feel that technical qualifications get you onto the path for sanitation leadership, even if as you progress you use those technical skills less and less.

Key informants in utilities highlighted strong communication and interpersonal skills as good indicators of performance in senior positions. HR key informants indicated that they would look for documented achievements in previous positions and markers of professionalism such as membership in professional bodies or continuing professional development.

PURSUING A SANITATION CAREER

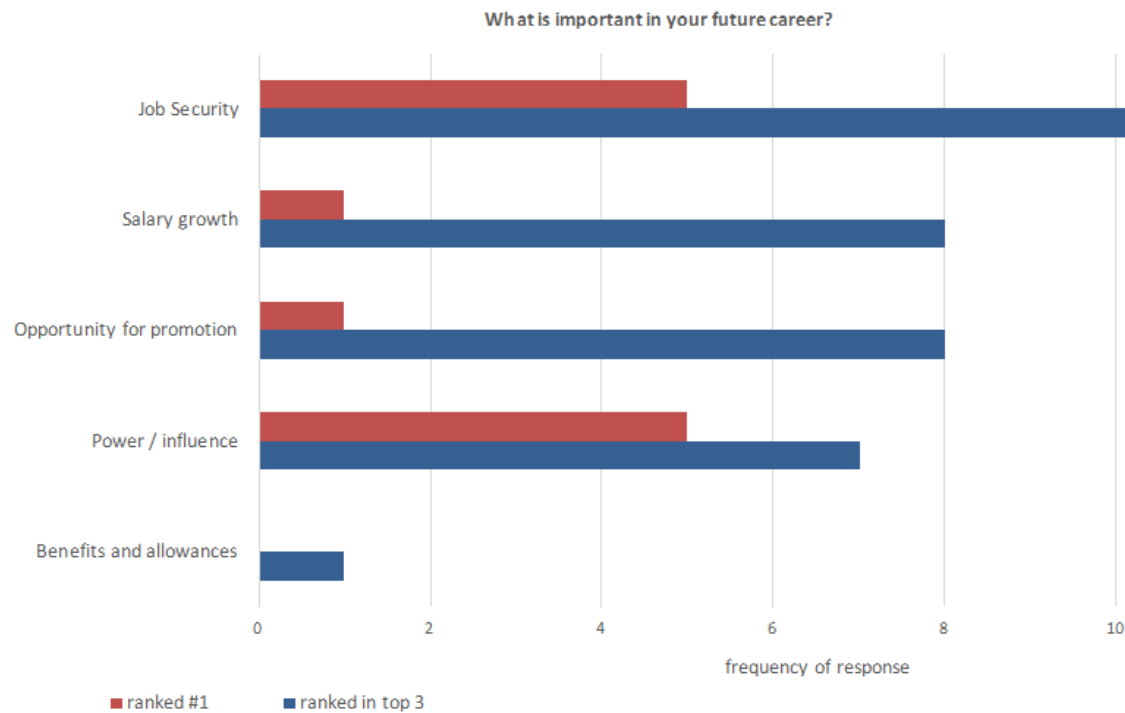
The feasibility study also explored the perspectives of final-year students in Kenya and Uganda who are planning to embark on a career in sanitation. Figure 4 presents the data for students at the Kenya Medical Training College (KMTTC) on what they are looking for in terms of career progression. After job security, students were keen to have salary growth and opportunities for promotion. Third most often, several students ranked power and influence as key factors important in their future careers.

The students in both Uganda and Kenya were almost universal in thinking that:

- Job security is higher in public sector institutions.
- Remuneration and salary growth are likely to be higher in nongovernmental organizations (NGOs), the private sector, or utilities.
- Promotion opportunities in the private sector, NGOs, and utilities would more likely be merit based (i.e., on the performance of the individual candidate).
- Promotion opportunities in the public sector would more likely be based on political networks and length of service, regardless of performance.

This is consistent with the International Water Association (IWA) finding that the public sector typically has lower salaries than the private sector and a lack of career development.¹⁷ This makes it an unattractive option for highly skilled graduates who could access the private sector, which is a more highly paid job market. However, the public sector offers a level of job security that may be attractive to some graduates.

FIGURE 4: KMTC STUDENT RANKING OF IMPORTANT CONDITIONS IN FUTURE CAREER



HR CONSTRAINTS IN SANITATION

Figure 5 shows East African countries’¹⁸ responses to constraints to sanitation HR. The most common constraint is that recruitment practices are unclear or inefficient. The most severely ranked constraint was skilled staff not wanting to work in rural areas and preferring to work in other (non-WASH) sectors. Other studies also found a similar pattern of qualified individuals preferring to work and live in towns.¹⁹

¹⁷ Saywell, D., & de Vette, K. (2014). *An avoidable crisis: WASH human resources capacity gaps in 15 developing economies*.

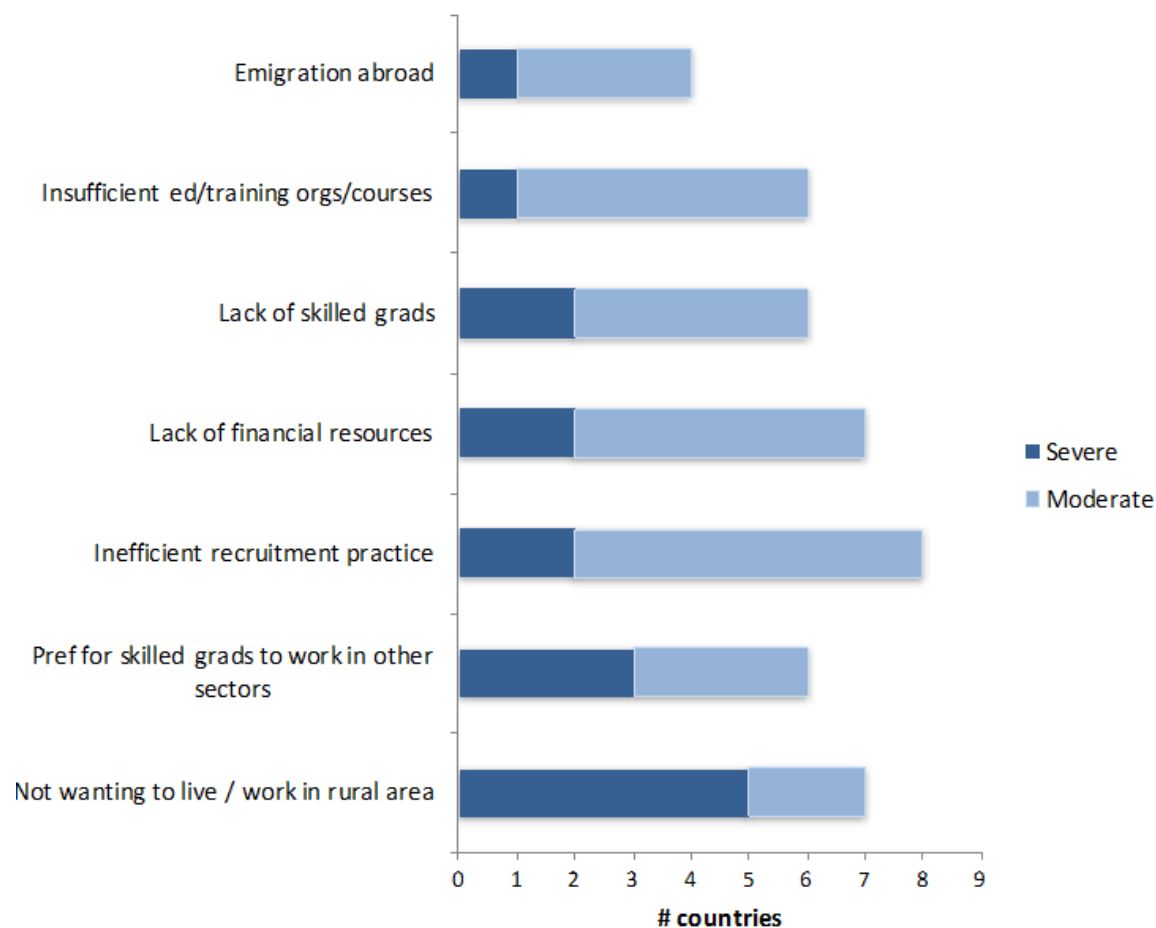
¹⁸ Burundi, Eritrea, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Uganda, and Tanzania.

¹⁹ Saywell, D., & de Vette, K. (2014). *An avoidable crisis: WASH human resources capacity gaps in 15 developing economies*. Note that IWA presented this data for all GLAAS countries and found a quite different pattern, with finances, preference to work in urban areas, and lack of skilled graduates being the top three constraints.

GENDER

The women leaders that we spoke to all felt that they had to work harder and smarter to get their positions. All of them felt that they had at one point been passed over by colleagues who at the time of promotion were at a similar or lower level and not performing as well. Despite the prejudices and discrimination that the women leaders felt, all of them said that the experience they gained while overcoming the discrimination had helped them become better leaders.

FIGURE 5: REASONS FOR HR CONSTRAINTS IN WASH IN EAST AFRICA



ABILITY TO ATTRACT AND RETAIN PROFESSIONALS

ATTRACTING SANITATION PROFESSIONALS

In addition to tangible factors such as job security, sector financing, and promotion opportunities, there seems to be an underlying unattractiveness or stigma of sanitation as a sector. It is not seen as an aspirational or priority career either by professionals or those in charge of allocating HR, both within and outside the sector. In some countries, you may have little control over your career choice. In Uganda, Ethiopia, and Kenya, respondents described how the top performers at secondary school are

allocated places at university with little choice of which type of course they pursue.²⁰ Likewise, once in the government system, well-performing individuals can be moved to different jobs with little notice or can be moved out of the sector to sectors with higher political priority.

For the sector to attract the highest caliber of HR, sanitation needs to become aspirational. Rather than students being allocated to sanitation because other courses are full, they need to be competing to get into those courses and competing for jobs. Several respondents noted that this is an area that needs to be addressed to ensure that high-performing candidates are attracted and retained in the sector.

“The profile of sanitation is growing, but needs to be higher. The profile is not where it should be to attract high-caliber staff. In the past, poor performers were dumped in sanitation—it does not happen now, but we need to shift the mentality and view.”

—Rose Kaggwa, National Water and Sewage Company (NWSC), Uganda

RETAINING GREAT STAFF

Respondents struggled to name great leaders who have built their careers and remain in the sanitation sector. There is a view that once people had proved themselves in sanitation they got taken away to something “more important.” Retaining staff is very closely linked to whether sanitation is seen as aspirational and also to the pay and remuneration that staff receive. In contrast to government careers, key informants felt that in utilities, NGOs, and the private sector there was more scope to plan a career pathway within the organization and a higher likelihood that the plan could be followed.

EXISTING COURSES ON SANITATION

As in most countries, there are no sanitation-specific undergraduate degrees available and very few sanitation-specific courses offered in the region (see Annex D). There are a few examples of degree programs specific to sanitation such as the master’s degree in integrated sanitation management offered by University of Dar es Salaam. There are no sanitation-related advanced diplomas in Kenya,²¹ which means that public health officers (PHOs) who want to advance to more senior positions need to specialize in another area (not sanitation).

At the graduate level, general civil engineering degree courses, which include WASH, tend to have limited sanitation modules, and public health degrees do not seem to address sanitation directly (see Annex D). Sanitation engineering does not exist as a qualification in regional training institutions.²²

Available courses do not reflect the regional complexities of sanitation service delivery. Despite East Africa’s rapidly growing urban population, we found only two courses that have specific modules on

²⁰ If students can afford to self-fund, then they can choose the course they want, otherwise they are allocated.

²¹ KII APHOK (see Annex A).

²² Saywell, D., & de Vette, K. (2014). *An avoidable crisis: WASH human resources capacity gaps in 15 developing economies*.

urbanization and urban planning. Modules on pro-poor approaches to sanitation or fragile contexts are not available in any course, yet are a priority for the sector in East Africa.

Technology and new approaches tend to develop faster than the curriculum of most degree courses, therefore there is a lag between what graduates are trained in and what they need when they enter the workforce.

“Non-networked sanitation has been a challenge for years, but is a “forgotten topic” [in degrees]. The top challenge is changing the mindset that urban sanitation means networked-sanitation...future-thinking solutions are what’s needed, the training needs to keep up with the needs of the sector, because business as usual isn’t working.”

—Dennis Mwanza, Bill & Melinda Gates Foundation, USA

At the degree level, most WASH technical courses are composed of technical modules with little management or leadership content. As part of the work done for this feasibility study, course content was reviewed and can be found in Annex B. Of the degree level, technical courses searched (engineering, environmental health, public health) in the East Africa Region, most include a management module, but few include leadership skills options. The exception to this is Cavendish University where public health and environmental health sciences bachelor’s degrees include leadership skills modules such as communication, economics, and advocacy, as well as several broad management options, including working with NGOs.

POST-GRADUATE TRAINING

Technical graduates are expected to undertake a management course to supplement their skills. National institutions for public administration and management usually provide leadership or management training for government staff and civil servants from different backgrounds. The Kenya School of Government offers several courses aimed at providing leadership and management skills. These residential courses last two to six weeks. These courses are a requirement for promotion to higher job grades within the Government in Kenya. In Uganda, completing a management course is also a requirement for promotion to district-level positions. The Uganda Management Institute offers courses lasting 1–12 months, which can be taken as full-time or part-time options.

From the analysis of the course curricula, it seems that generally leadership courses focus more on the desk-based understanding of management and governance issues and less on softer leadership skills such as communication, teamwork, or strategy.

Accreditation of professional courses is an important issue in the region. The employers interviewed reported that they do review the formal and informal training that applicants have undertaken, even if it is just a certificate of participation. Some respondents noted that they have taken several different courses to build their own capacities in a range of subjects, but there is no process of accreditation or certification that acknowledges the sum of the parts.

PROFESSIONAL DEVELOPMENT FOR SANITATION

Training and continuous professional development (CPD) opportunities were highlighted by most sanitation professionals as key ways to build capacity. Training opportunities vary depending on where someone works.

Respondents agreed that softer leadership and management skills are usually developed as part of career progression and are learned from experience. However, there are occasional short courses on specific skills for those who have stronger leadership skills, but lack the technical background.

Respondents reported problems about how candidates are selected for training, mentoring, or CPD opportunities. In general (although not exclusively), the public sector tended to follow years of service or job grade/classification as the criteria for who should be afforded career growth opportunities or training. Utilities, NGOs, and the private sector had more flexibility, and often had systems to identify potential candidates, such as Nol Turesh Water Company in Kenya, which has a dedicated committee to decide which staff need different training based on their performance appraisals.

However, it was also pointed out by some respondents that if training or CPD policies are too open, staff will take advantage of training and then move to another sector or become “serial trainees,” building skills, but not using them for implementation. In NGOs and the public sector this was a consequence of the “per diem and allowances” culture that surrounds training.

Identifying Leaders Through Innovation

Dennis Mwanza gave an example from when he was the Managing Director of Lusaka Water and Sewerage company. When he arrived, he found that the department for sewerage was the worst department. There was a practice of shunting non-performing staff to that department. Yet, outside of the sewerage department Dennis found that there were people who had a passion for sewerage. He identified these people through “Innovation Wednesday”—this was an opportunity for people who had ideas for improving the company to present their ideas on a Wednesday and some of them presented on how to improve sewerage, and so were subsequently given the mandate to try out their ideas.

POLITICAL VOICE/ADVOCACY

Leadership in sanitation is required to effectively advocate for the political prioritization of sanitation. Most respondents deemed leadership qualities to be missing from the sanitation sector in the region, meaning that the strong political voice required to influence policy is absent. Key informants were asked about the qualities of good leadership (see Figure 6).²³

Often these qualities are “innate” qualities and not necessarily those that are taught formally. Leadership skills come mainly from experiences rather than education. Key traits can be learned, but they are learned from experience and from peers and mentors. Even if these qualities are “taught” in a classroom or course, they need to be experienced to be embedded, because leadership style is unique to a person, and part of the make-up of their character.

²³ The word cloud (see Figure 6) is made up of specific sanitation leadership qualities analyzed using content analysis of the interviews with key informants in response to questions on qualities essential to driving the sanitation agenda in East Africa. The larger the font, the higher the number of people who mentioned that specific trait or quality. This information provides insight into what the missing skills are that should be addressed by ASA.

“Leadership is a personal trait—it can come from education, but it is more an inner thing. Coaching and experience can also bring out leadership. Anyone can have an education; a leader is something that comes from inside.”

—Rosemary Kijana, Nairobi Water and Sewerage Company, Kenya

FIGURE 6: LIST OF LEADERSHIP QUALITIES DERIVED FROM KEY INFORMANT INTERVIEWS



SANITATION LEADERSHIP—A VOCATION

Respondents felt that the qualities of any leader are the same for sanitation, but that at this moment in time, leaders are needed who are motivated to change the status quo for sanitation. It is important for any leader to be behind their subject and this came out particularly strongly for sanitation.

“Yes, it’s about having a passion to want to do something in sanitation—the rest you can learn. Sanitation is addictive, it must become your vocation. We need to take opportunities to leverage all types of technical skills and apply them to sanitation.”

—Najib Lukooya, Kampala City Authority, Uganda

Example: Leadership Ripple Effect

“A sanitation leader needs to appreciate the importance of sanitation—their buy-in and follow-up can have a big impact. In Tanzania, in one district where the District Commissioner really prioritized sanitation, much more progress was made. He initiated the use of Sanitation Registers, which have subsequently been adopted nationally to monitor progress, so he had a ripple effect on those around him. Where a leader is driving the sanitation agenda with passion, it galvanizes action from the surrounding team.”

—Kaposo Mwambuli, WaterAid, Tanzania

BEYOND ENGINEERING

Many respondents noted that there has been a change in the backgrounds of those in sanitation leadership positions recently. Traditionally, they were from an engineering or environmental health background. But, several respondents pointed out that sanitation is not just an engineering/ technical issue anymore:

“There is a technical stream of leadership. But, what is more important is overall oversight leadership—those that hold others accountable for the promises made on sanitation. Leaders need to be looking at the bigger picture—the economic impacts of sanitation, and how it affects developmental goals—rather than how to fix pipes.”

—Kaposo Mwambuli, WaterAid, Tanzania

Technical Leaders or Leaders With Technical Support?

Almost all key informants, including both those who are leaders themselves and those who are external sector experts, rated leadership skills as more important than technical skills. Key informants felt that, especially at higher positions, leaders should find technical expertise in their teams:

“Having a technical knowledge is very important for those who are doing the work on the frontline. At my level, leadership skills become much more important.”

—Zufan Damtew, Ministry of Health, Ethiopia

For Somalia, it was different. It was the one country that strongly identified a lack of technical skills compared to leadership skills. The other country key informants and regional key informants felt that most sanitation leaders have the requisite technical skills or can mobilize them, but what they needed more of were skills in leadership and management—often referred to as “soft skills.”

SUMMARY

The region has the institutional capability to train technical sanitation specialists, but taking them to the level of leaders is challenging. Natural leaders, who are intrinsically motivated, see sanitation as a vocation and are those most able to advocate for more priority on sanitation; are better able to mobilize resources; and most able to translate resources into service delivery. Intrinsic motivation and vocation are difficult to “teach,” they come from admiring and being inspired by other leaders in the sector. They come from passion and drive to make a difference, from wanting to be part of a movement for social change. These are traits that are not taught, but which are inculcated through interaction and experience; it is leaders with these traits who will be most able to make a radical change to the sanitation sector, who will innovate, who will get sanitation higher up the political agenda. These leaders do not necessarily need a technical background, because they can gather the necessary technical skills from the team they have around them. What they need is vision and the ability to inspire and develop a strategy to be executed.

However, there is another level of leaders, whose skills can be acquired through classroom-based learning and consolidated in the field—it is they who are the mainstay of managers needed to ensure that implementation efforts are maximized, efficient, and executed. They need to be motivated and able to overcome challenges, but the level at which their skills will be deployed means that most of the skills they need can be learned. Although training will give them some knowledge, it will be interaction with peers and mentors and through on-the-ground experience that will improve their capabilities to lead.

FIGURE 7: ISSUES TO TARGET IN THE CYCLE OF GROWTH

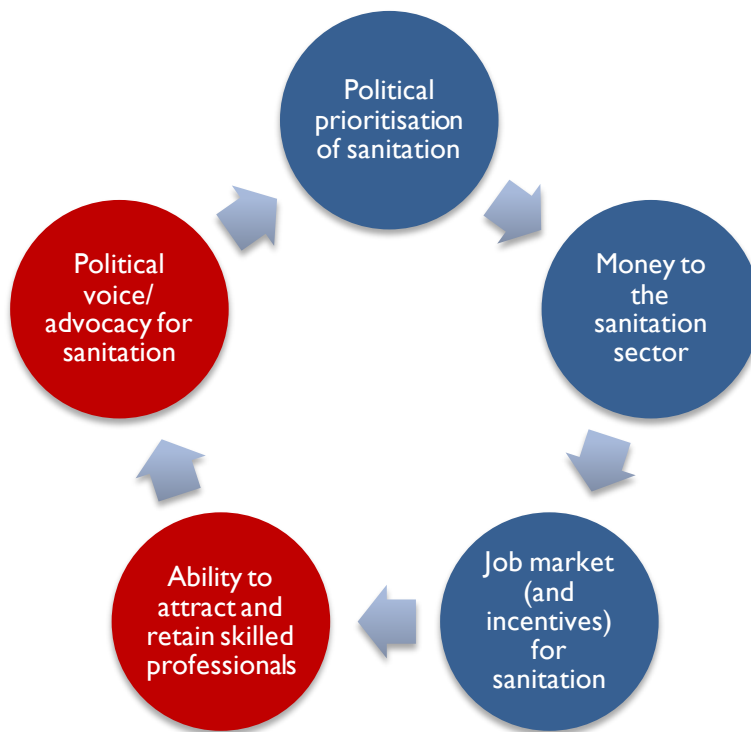


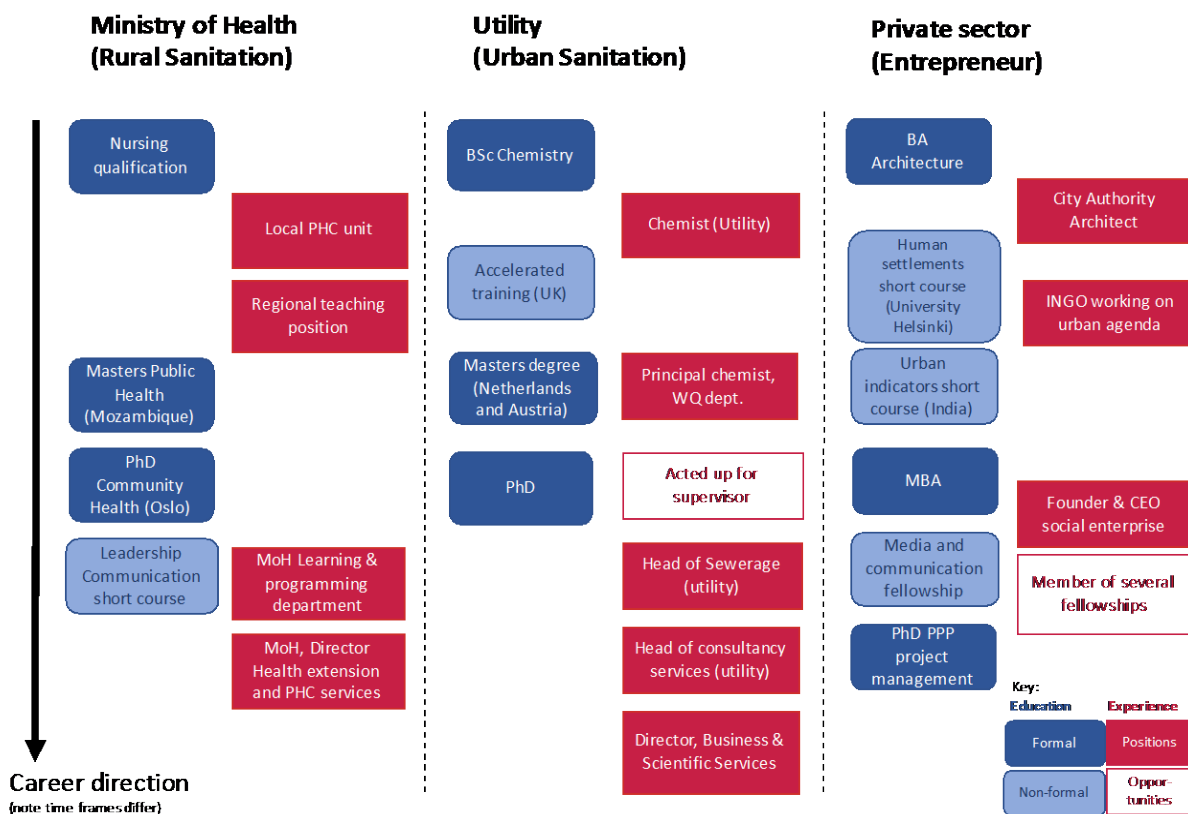
Figure 7 (taken from Figure 1) demonstrates how the lack of political prioritization, financing, and talented professionals are linked, and therefore provide opportunities for issues to be addressed and the cycle put on a positive track. The red circles in this version of the framework, highlight the aspects of the cycle that the ASA seeks to influence. The ASA concept will directly address the ability of the sanitation sector to attract and retain the most skilled professionals, and to deliberately nurture sanitation leadership to increase the political voice of the sector. However, it does so within a broader political and economic landscape (the blue circles), which will also need to be influenced if the SDGs are to be met.

POTENTIAL SOLUTIONS TO MEET THE DEMAND FOR SANITATION LEADERSHIP

FOSTERING SANITATION LEADERSHIP

Sanitation by nature is multidisciplinary, requiring a mix of technical skills from engineering and environmental health, to social scientists and economists. Thus, sanitation leaders also come from a wide range of backgrounds and through different pathways, as demonstrated in Figure 8. The figure compares the career pathway of three different sanitation leaders interviewed for this feasibility study. The leaders are on different career paths within the sector, one working in rural sanitation, another in a utility, and the third in the private sector. The boxes represent formal education (dark blue) and informal education (light blue) and the red boxes represent experience gained through positions held (dark red) and opportunities taken (red outline).

FIGURE 8: SANITATION CAREER PROGRESSION COMPARISON



FACTORS THAT INFLUENCE LEADERSHIP

Despite the lack of a single sanitation career pathway, during interviews with sanitation leaders from all tracks (urban, rural, private and public) some common themes ran through their responses regarding factors that influenced their career, namely: experience, mentors and communication.

TOP THREE FACTORS INFLUENCING LEADERSHIP

- **Experience:** Firstly, that leadership comes not only from courses and training, but as a result of experience, learning-by-doing, working collaboratively, and exposure to good leadership examples.

“Leadership comes from work experience, but also from courses, working with others and exposure to good managers.” —Dr. Zufan, MOH, Ethiopia

- **Mentors:** Having an experienced mentor to show them the ropes, or encourage them to try new ideas and think outside of the box.

“Having mentors is important. I had important mentors, especially as a student and now I am at a stage where I am mentoring other people.” —Dr. Zufan, MOH, Ethiopia

“I was mentored to be a manager rather than getting training.” —Cate Nimanya, Water for People, Uganda

- **Communication:** The importance of having a voice, that being able to communicate effectively inside and outside the sector, and be recognized has been a key aspect of becoming a leader.

COURSES THAT EMPHASIZE THE DEVELOPMENT OF LEADERSHIP SKILLS WITHIN A TECHNICAL SUBJECT

Analysis of sanitation-related course curricula shows that few courses offer modules that focus on the leadership skills, such as communications, advocacy, and economic analysis, required to strengthen institutions and systems to mobilize and utilize resources for the sector. There are, however, some courses that address these skills, particularly within private universities that invest resources in ensuring that their courses are relevant to the sector and offer an education that is employment-focused.²⁴ An analysis of sanitation-related course curricula shows that Cavendish University prioritizes modules that focus on management and leadership skills—including modules on communication skills, health economics, and health financing—at the undergraduate level, which better equips students for the workplace after graduation.

Private vs. Public Universities

It appears that private universities, compared to public universities, are keeping pace with teaching the skills employers need. This may be because private universities must ensure that their students find employment since this is a key metric on which potential students make decisions about whether to attend. Conversely, most public universities in the region are given the “best” candidates from school, yet key informants indicated that many of the courses in public institutions are poorly managed and are out of date. For example, some institutions in Kenya have only recently included community-led total sanitation (CLTS) on the syllabus, despite it being part of national policy for more than eight years. There is a huge range in the quality of private institutions in East Africa, but there are those that have been accredited by the relevant higher institution boards, and which have partnerships with prestigious institutions.

COURSES THAT PROVIDE OPPORTUNITIES FOR WORK EXPERIENCE

Employers are more likely to offer positions to candidates with some level of work experience.²⁵ The East African universities studied do not provide traditional “sandwich” degree courses, where the taught portion of the course bookends a year-long industry placement. However, several university degree programs in both engineering and public/environmental health include practical work experience in the form of attachments/internships. For example, the B.Sc. civil engineering course at Makerere University offers two eight-week industrial placements. Public health degree graduates in Kenya are expected to complete a one-year attachment, during which specific targets have to be reached (evaluated by a senior PHO) before entering government service.

Diploma courses followed by PHOs also include field-based, supervised attachments aimed at giving hands-on practical experience to students. In Kenya, this work experience alongside experienced staff was reported by PHOs as being very useful.²⁶ However, in Uganda, diploma student field placements have been decreased in recent years. Rural field placements have been reduced from three months to one month, and the urban placement canceled altogether, leaving graduates less “work ready.”²⁷

²⁴ KII Cavendish (see Annex A).

²⁵ KII APHOK (see Annex A); and Ball, C. (2013). What employers think about sandwich courses and work experiences.

²⁶ Ball, C. (2013). What employers think about sandwich courses and work experiences.

²⁷ Ibid.

SHORT COURSES

Sanitation professionals usually undertake short courses that fall into two categories: 1) technical short courses that address specific aspects of their field, such as CLTS; or 2) leadership and management courses that are required for career progression.

There are several sanitation short courses offered in the region by official institutions, which mainly target staff undertaking CPD. Makerere University runs an eight-week certificate course on WASH, which includes a four-week field placement, Kenya Water Institute has one-week short courses on technical issues such as operation and maintenance of wastewater treatment and disposal systems. Technical courses are also offered by overseas institutes such as the IHE Delft Institute for Water Education (IHE Delft), and by regional training institutions such as Network for Water and Sanitation International (NETWAS).²⁸

Short courses in leadership and management are a prerequisite for civil servant career progression within government (Kenya, Tanzania, Uganda), and are offered by institutions such as Kenya School of Government, Uongozi Institute, and Uganda Management Institute. Most courses under this category are classroom based, without much scope for experiential learning.

ONLINE COURSES (INCLUDING MOOCS²⁹)

There are several online courses available on sanitation-related subjects. Online courses have the advantage of not being location specific, and are theoretically available to all. However, they also rely on internet connectivity, which can be problematic in some areas.

Information provided by the organizers of two sanitation courses shows participation in East Africa is quite high. However, other than the country of registration, little information is collected pertaining to participants, so it is not possible to know what proportion work for the government, utilities, or the private sector.

Several key informants felt that online courses were not a valued form for learning either because they lacked opportunity for interaction, or because of connectivity issues. This is borne out by the high dropout rate registered by the Scaling Up Rural Sanitation course (note that the course organizer expects a 10 percent completion rate for a free online course). Integrating opportunities for interaction (either face-to-face or via webinars) and having online courses from prestigious institutes could be mechanisms by which acceptance of online courses could be increased.

ONLINE COURSES THAT PROVIDE OPPORTUNITIES FOR PEER INTERACTION

Feedback from some key informants, including sanitation leaders, suggests that motivation for online, lecture-based courses could be lacking. However, having the opportunity for interaction—for example by having group sessions to feed into an online process—could make online courses more attractive.

²⁸ Note that NETWAS has a reputation for having a mainly rural focus (Kil Dennis Mwanza—see Annex A).

²⁹ MOOCs (Massive Open Online Courses) are made available online, free of charge, with unlimited participation.

“The format is important; people want to participate in the online meetings rather than be lectured to. [For SWA sessions] participants were particularly enthusiastic about sessions where they got to present their own work, or have other countries present to them...peer-to-peer, lateral learning.”

—Fiorella Polo, UNICEF, USA

Online courses such as the Swiss Federal Institute of Aquatic Science and Technology (EAWAG) sanitation series, which promotes the use of participant discussion forums for peer-to-peer support and debate, could provide a model to satisfy this demand for interactive participation in learning.

ONLINE COURSES THAT ARE CERTIFIED BY RECOGNIZED INSTITUTES

As with other courses, the provision of a certificate of completion for an online course is likely to be important to trainees in the East Africa region. The quality of the issuing institution is also important; accreditation from a recognized institute raises the perceived “value” of an online course for some employers.

“Staff do online courses on their own time,” “[I would consider an online course as a valid addition to a CV]...as long as they are from a known or reputable organization.”

—Rosemary Kijana, HR Director, NWSC, Kenya

“For senior positions the formal qualifications would be considered only.”

—Samuel Parteri, HR Director, Nol Turesh Water Company

ONLINE COURSES: ENROLLMENT IN EAST AFRICA	
<p>Scaling up Rural Sanitation³⁰</p> <p>World Bank/Water and Sanitation Program (WSP) and Water, Engineering, and Development Centre (WEDC)</p> <p>English and French</p> <p>Self-paced (approx. 3 hours)</p> <p>Certificate of achievement</p> <p>Free</p> <p>Enrolment: 2,504 (approx. 15% completion rate)</p> <p>Enrolment from East Africa: Burundi, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, South Sudan, Tanzania, Uganda (numbers not available)</p>	<p>Planning and Design of Urban Sanitation³¹</p> <p>EAWAG</p> <p>English, French, Hindi, Spanish</p> <p>5 weeks (approx. 25 hours)</p> <p>Statement of accomplishment</p> <p>Free</p> <p>Opportunity for peer learning, discussion forums, and debates</p> <p>Enrolment: 6,500 (completion rate not available)</p> <p>Enrolment from East Africa: Uganda 93, Tanzania 92, Kenya 91 (note that by number of participants Uganda, Tanzania, and Kenya were 6th, 7th, and 8th. In Africa, only Nigeria was ahead in 3rd with 195 registered participants)</p>

³⁰ Rand, E. (personal communication, December 2016). World Bank; and Shaw, R. (personal communication, December 2016). WEDC.

³¹ Sutter, F. (personal communication, November 2016). EAWAG.

FELLOWSHIPS

A fellowship program is a short-term professional development opportunity that lasts from a few months to several years. Fellowship programs are usually sponsored by a specific association or organization seeking to expand leadership in a particular field (e.g., University of California at Berkeley).³²

The study looked at two fellowship programs in detail, which are summarized in below. Although no sanitation-specific fellowships have been identified, examples from other fields highlight the potential of such programs to address identified sanitation leadership development needs in East Africa by providing guided experience, links to mentors and peer networks, and teaching elements that include leadership skills.

SUMMARY OF FELLOWSHIP PROGRAMS	
<p>Program: Aspen New Voices Fellowship Program</p> <p>Institute: Aspen Institute.</p> <p>Partners: Bill & Melinda Gates Foundation.</p> <p>Field: Media skills, communication and leadership programs for global development advocacy.</p> <p>Cohort: 1-year program, approx. 20 fellows*</p> <p>Targets: Development professionals from the developing world with a record of significant professional achievement.</p> <p>Methods: 1:1 sessions with mentors and access to specialist mentors; short residential training in S.A (e.g. communication, leadership); Aspen global ideas festival (panels, TED talks); introductions to influencers.</p> <p>Taught: e.g., pitching to editors; social media; oral storytelling; how to be an influential voice; what is a leader; how to be a thought leader.</p> <p>Network: Aspen New Voices alumni network offers a continued discussion/ knowledge/ learning platform.</p> <p>*Initial cohort focused on epidemiology only, later cohorts will diversify.</p>	<p>Program: Uganda Public Health Fellowship Program (PHFP)</p> <p>Institute: Makerere University.</p> <p>Partners: Uganda MOH, U.S. Government – Centers for Disease Control and Prevention (CDC).</p> <p>Field: Public health leadership training-through-service program.</p> <p>Cohort: 2 years, 10 fellows.</p> <p>Targets: Ugandan Public Health professionals with master’s degree plus 3–7 years of experience.</p> <p>Methods: 80% field projects; supervision and mentorship provided by the MOH, CDC, and Makerere University School of Public Health; develop competencies while providing public health services to MOH and District Health Team; 20% interactive didactic learning; seminars, debates.</p> <p>Taught: Effective communication; public health programming; leadership and management; applied epidemiology.</p> <p>Network: The first cohort that graduated in 2017 have formed an association that will be open for future fellows to subscribe.</p>

PROGRAMS THAT PROVIDE GUIDED EXPERIENCE

Fellowship programs such as the partnership between Makerere University, Uganda MOH, and CDC are designed around the concept of training through service. During the two years of the program, fellows spend the majority of their time attached to priority technical units of the MOH, which provides valuable, hands-on experience and the opportunity to practically apply lessons. Respondents also mentioned the value of other fellowship programs in which they had participated.

“Having had an opportunity to be on the Aspen New Voices Fellowship, it exposes you to an idea, then you go away and work on it, and then come back to

³² University of California at Berkeley. (2017). *Fellowships*.

it with your peers and are able to reflect, you just learn more through practical experience.”

—David Kuria, Private Sector, Kenya

PROGRAMS THAT PROVIDE LINKS TO MENTORS AND PEER NETWORKS

Fellowship programs link students to seasoned professionals for guidance and support. Mentors for the Aspen New Voices Fellowship are attached to a small number of fellows for one-to-one support, but also offer specific areas of expertise to the wider group, for example, the mentors may include a print journalist, a social media expert, and a public speaking expert. Mentors can come from a different field (e.g., Aspen New Voices Fellowship mentors) or be senior specialists in the same field as the fellows (e.g., Uganda PHFP). Fellowship programs can also give the opportunity for links to an alumni network, which can be a valuable source of peer support and knowledge exchange during and after the program.

TAUGHT COURSES THAT FOCUS ON LEADERSHIP SKILLS

Both fellowship programs are designed to build professional capacity for leadership by offering the theory of leadership through taught courses, combined with the opportunity to practice and reflect on skills learned with mentors and peers.

KNOWLEDGE EXCHANGE

Knowledge exchange and peer-to-peer learning have been used in the region to help sanitation professionals learn from others in the field with similar experience. For example, government and public health officials from Nakuru County in Kenya visited Rwanda to gain insights into solid waste management as they prepared their own solid waste policies; PHOs from Migori County visited Nakuru to shadow their counterparts and learn why and how Nakuru was making more progress. Many organizations, including World Bank, are investing in knowledge exchange or South-South learning as a cost-effective approach to building capacity. World Bank recently published a guide to knowledge exchange for the water and sanitation sector.³³ It includes examples such as how Peshawar City in Pakistan learned from South African utilities how to reach the urban poor; or how Niger learned from Kenya how to include sanitation marketing. It also includes practical guidance for how to utilize different knowledge-exchange activities, and how to plan, execute, and monitor if the results were achieved. Knowledge exchange, or peer-to-peer learning, is a powerful way to share, replicate, and scale up what works in the water sector. When done right, knowledge exchange can build the capacity, confidence, and conviction of individuals and groups to act. Direct results from knowledge exchange can also influence results at the institutional and systemic levels. Participants of successful knowledge exchanges are empowered and motivated to make things happen. They will seek to change the environment in which they operate, affect policies and norms that influence the way people behave, and strengthen the institutions where they work. Every knowledge exchange initiative is a blend of instruments, activities, and delivery modes. Planning for and selecting an appropriate mix, keeping in mind the operating

³³ Kumar, S., Coombes, Y., Yovides, Y., & Crabbe, R. A. (2016). *The art of knowledge exchange: A results-focused planning guide for development practitioners in the water sector.*

constraints and opportunities, helps participants realize the desired intermediate outcomes, which should also be specified in advance.

OPPORTUNITY TO LEARN FROM PRACTICAL EXPERIENCE OF PEERS

The value of knowledge-exchange activities was stated by key informants from the Ministry of Environment in Somaliland and Puntland regions of Somalia, who said that they preferred knowledge-exchange activities to classroom-based activities. Shadowing someone with a similar job was useful in that it allowed them to learn more tacitly through engaging and watching other people. All countries had some experience of knowledge-exchange programs, and all were highly valued as a way to learn and build capacity rapidly, especially when they were tailored to particular needs. Much of formal learning is based on the “lowest common denominator”—meaning that the curriculum has to cover all the possible gaps that a potential student might have. Knowledge-exchange activities allow for more self-directed learning, targeted in a short amount of time.

TABLE 2: STRENGTH OF KNOWLEDGE-EXCHANGE ACTIVITIES FOR ACHIEVING OUTCOMES

TYPE OF KNOWLEDGE-EXCHANGE ACTIVITY		
Outcomes	Stronger	Weaker
New Knowledge	Study tour, knowledge fair, conference, community of practice, competition/challenge, expert visit, workshop	Multi-stakeholder dialogue and consultation, knowledge jam, twinning
Enhanced Skills	Workshop, expert visit, twinning, study tour, knowledge jam, just-in-time support	Knowledge fair, conference, multi-stakeholder dialogue and consultation, community of practice, competition/challenge
Improved Consensus	Multi-stakeholder dialogue and consultation, study tour, expert visit workshop	Community of practice, competition/challenge, conference, knowledge fair, knowledge jam, twinning
Enhanced Connectivity	Community of practice, conference, knowledge fair/marketplace, multi-stakeholder dialogue/consultation, study tour, workshop, twinning	Competition/challenge, expert visit, knowledge jam
New and Improved Actions	Expert visit, workshop, study tour, knowledge jam, competition/challenge, multi-stakeholder dialogue and consultation, twinning	Conference, knowledge fair, community of practice

Source: Adapted from *Art of Knowledge Exchange: Results-Focused Planning Guide for the Water Sector*.

POTENTIAL FOR MOBILE TECHNOLOGY

Given the depth of mobile phone technology penetration across the region, there is considerable scope to include mobile apps such as WhatsApp to continue and strengthen knowledge-exchange networks. This has been the case in Kenya where post-CLTS training WhatsApp groups have provided a forum for peer support and continued discussion when training participants are back in their duty station. WhatsApp usage in Africa is the second highest region in the world at 63 percent behind Latin America

(66 percent), but ahead of Europe and Asia at 33 and 35 percent respectively.³⁴ WhatsApp can be used to create learning and study groups; to send audio lessons and assignments, including videos and graphics; and to facilitate real-time communication between trainers and learners, and between those taking the training. Mobile technology allows peers to connect following training and to connect if they are carrying out online training. In addition, social networks such as Google Plus, LinkedIn, and Facebook provide opportunities to connect with learners at any time and from anywhere.

MENTORING PROGRAMS

Sanitation leaders and other key informants noted the importance of mentors to guide and support staff at all different stages of their careers. Mentorship examples ranged from ad hoc placements where it is hoped that senior staff in situ will provide mentorship, to a structured mentorship program, such as the fellowship models in the previous section. Where an official mentoring program is not in place, it is often up to individual staff to connect with and learn from more senior staff.

MENTORING

Courses that connect staff to mentors specific to their capacity development needs may better support learning. The use of mentors is central to the proposed Water Resources Institute (WRI) in Entebbe, which aims to generate cross-sector capacity and applied research on water resources. WRI hopes to identify and attract sector experts with considerable experience, for example, those who have recently retired from public service, to act as trainers and resource people on a semi-voluntary basis. In addition, the institute hopes to draw on expertise from the private sector, civil society, and NGOs.

IN-HOUSE TRAINING PROGRAMS

While government CPD arrangements are in place in most countries, NGOs, utilities, and the private sector seem to be more advanced in their thinking about how to use mentors and CPD to enhance the skills and capacities of their staff, and to ensure that staff are building a career with goals for how to reach the next level. The National Water and Sewerage Company in Kampala has, over many years, developed an in-house training program recognized as providing clear career progression through internal capacity development, job rotation, and promotion.³⁵ The program also includes a consulting and advisory arm and could provide a good model for other utilities in the region seeking to build internal leadership capacity (see box on next page).

NATIONAL WATER AND SEWERAGE COMPANY, UGANDA—IN-HOUSE TRAINING

Training

NWSC has developed its own vocational training facility. Originally, it was just water, but sanitation was added, because a lot of the skills needed are across both water and sanitation. They take people from quite a low level—it started with people who did not have formal qualifications, but were working with NWSC (plumbers, electricians)—who now hold certificates level 1 to 3. NWSC has developed a range of modules covering a range of skills.

Consultancy

NWSC has also developed a consulting unit for knowledge exchange and learning, which does lots of work outside Uganda. First, it was encouraged by donors and they funded it, but now NWSC solicits proposals for the work. NWSC has also done work on benchmarking and has developed tailor-made packages for utilities based on their benchmarking score.

Advisory

³⁴ Global Web Index. (2017). *Apps*.

³⁵ Kili Kirsten de Vette, IWA (see Annex A).

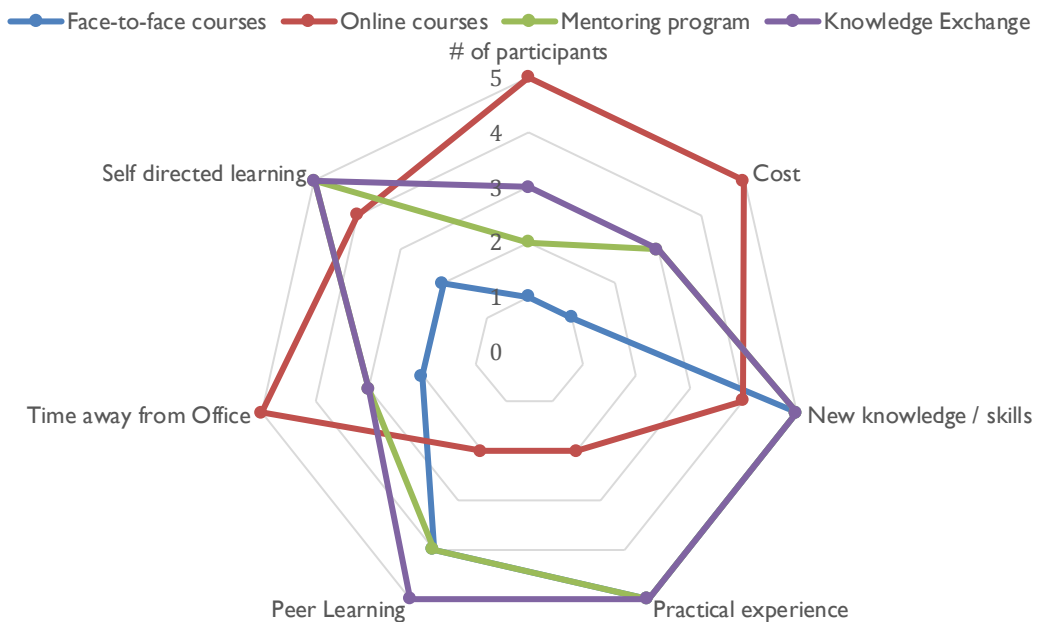
NWSC has also developed advisory services to analyze a utility’s strategic plan for operations, organizational structure, commercialization plans, monitoring and evaluation (M&E), billing functions, financial management, non-revenue water, and water quality. NWSC works with board members and municipal authorities to strengthen utility management. Through these activities, NWSC has an explicit plan to raise the profile of sanitation services.

SUMMARY

The feasibility study examined various models for leadership development both inside and outside the sanitation sector. The models and approaches include more traditional face-to-face training and approaches that capitalize on technology such as social media and WhatsApp. What is apparent from the feedback from key informants (and students) is that there is no “one-size-fits-all” approach.

Figure 9 provides a comparison of four different models of training according to seven parameters—cost; number of participants; the potential to provide new knowledge and skills; opportunities for peer learning; potential for practical experience, time away from the office; and self-directed learning. For example, while online courses can reach many people at a low cost, they provide little opportunity for practical experience and peer learning, but do not necessitate having time off from a job. Conversely, face-to-face taught courses and mentoring programs are much higher cost, and have a high potential for building skills and experience, but require people to have more time away from their jobs. Knowledge-exchange programs are very similar to mentor programs, but have the potential to reach more people and for more peer-to-peer learning opportunities. These two approaches also do better on self-directed learning, where the learner is accessing the specific knowledge, skills, and capacities they need, rather than having a “curriculum” to learn, even if not all of it is relevant.

FIGURE 9: COMPARISON OF APPROACHES FOR ADDRESSING LEADERSHIP DEMANDS



Drawing on lessons from these examples, the next section proposes a model for the ASA in East Africa, which builds on their successes, with an understanding of their limitations and the unique problems facing sanitation leadership that need to be addressed.



UNICEF ETHIOPIA/2011/LEMMA

PROPOSED MODEL FOR THE ASA IN EAST AFRICA

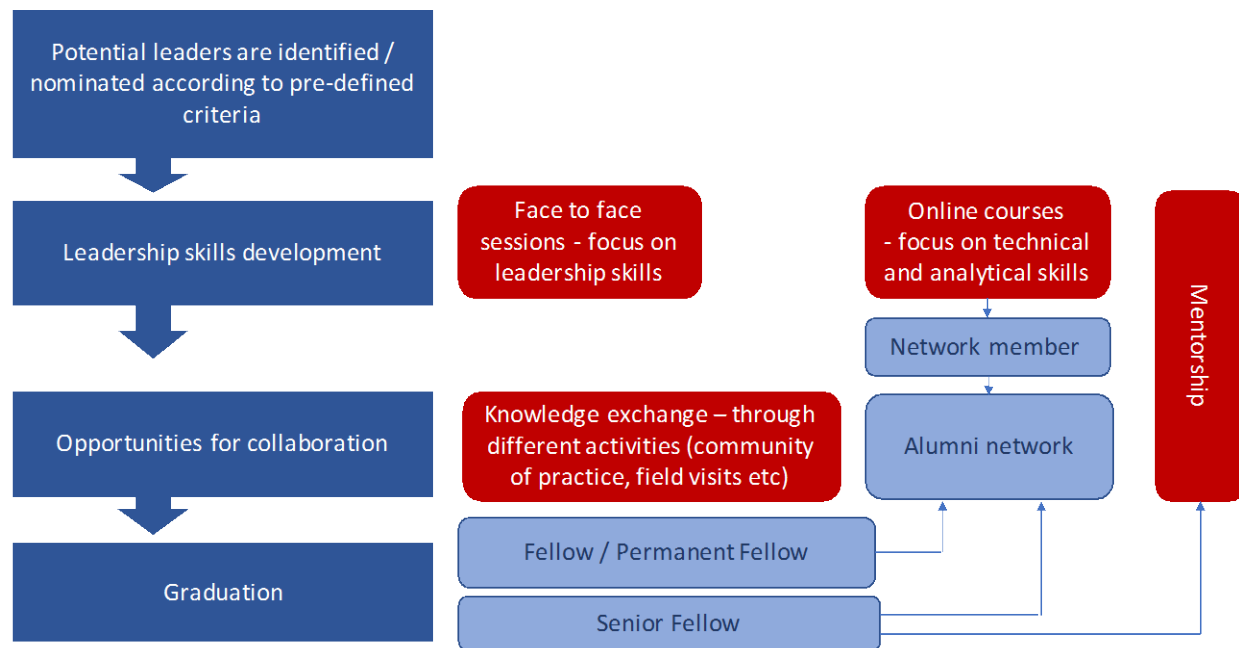
The proposed model for the ASA is based on the premise that to address the sanitation challenge in East Africa leaders must be able to:

- Advocate for more priority on sanitation.
- Strengthen institutions and systems.
- Effectively translate resources into services within a context of inequality and rapid urbanization.

In response to identified shortcomings in sanitation leadership in East Africa, the ASA model aims to produce leaders who are innovative and analytical, and can communicate inside and outside their sector, to ensure that implementation efforts are maximized, efficient, and executed.

PROGRAM DESIGN

FIGURE 10: SCHEMATIC REPRESENTATION OF PROPOSED ASA



Key:



FELLOWSHIP PROGRAM

The proposed ASA for East Africa follows a fellowship type model as shown in Figure 10. The fellowship is a one-year, part-time program (but can be spread up to a maximum of two years). Participants are nominated to the fellowship by employers or others in the sector.

The program combines online credits, with two to three shorter, face-to-face training sessions (one week maximum). During the year, structured opportunities for experiential learning and collaboration will be provided for practical application of taught skills. These opportunities will be based on technical problem solving. In addition to these structured/credited opportunities, participants will also start to build a network of contacts from the wider ASA network, as well as their own cohort, and self-identify opportunities for peer learning and knowledge exchange from their own work.

Throughout the fellowship program, participants will be attached to mentors for the coaching and support that the feasibility study has identified as being vital for building leaders.

Online credits: Open-access, Massive Open Online Course (MOOC) format, core modules linked to further reading.
Face-to-face credits: Classroom-based, three sessions annually, formal training plus practical sessions and knowledge-exchange opportunities

The methods used in the model build on lessons from existing approaches in a number of ways:

- Transferable leadership skills such as communications, strategy, and team building will be packaged for sanitation professionals, using sanitation sector examples and practical experiences. In this way, the program emphasis is on developing strong leadership skills within a technical subject matter.
- A suite of online modules will be complemented with face-to-face sessions and discussion groups. All will have credits and can be used within the same accreditation system.
- Skills taught will be consolidated outside the classroom through opportunities for real-time experience (in placement and knowledge-exchange activities), and linkages to experienced sector mentors.
- The ASA fellows network will be established to provide the opportunity for continuous dialogue and knowledge exchange on sanitation in the region (see below).

FELLOWSHIP MEMBERSHIP PROGRAM

Running parallel with the taught program will be an ASA fellow’s membership program designed to raise professional recognition of ASA, much like membership of a professional body, as well as provide a professional network for members. Membership as an ASA fellow will provide access to a prestigious “club” with members’ continued contributions encouraged and recognized through a tiered award system, to address the need to make careers in sanitation more aspirational and to tap into the importance of mentors and networks for building the sector.

ASA fellow	Being a fellow indicates that a professional has successfully graduated from the full year-long program.
Permanent ASA fellow	Conferred on an individual for continued engagement with the program. Permanent fellows are expected to remain active in the program through the alumni network platform for continued dialogue and knowledge exchange on sanitation in East Africa, for example, contributing to blogs or training.
Senior ASA fellow	A small number of graduating fellows who continue program engagement by becoming mentors of subsequent cohorts of fellows, and support/lead delivery of taught courses.
ASA network member	Online courses and the alumni network discussion forums will also be accessible to self-selected “network members” (at a small fee). In this way, the program can reach a broader audience of sanitation professionals.
ASA honorary fellow	An individual who has made an outstanding contribution to sanitation leadership in the region may be nominated and awarded an honorary fellowship to the program.

PARTICIPANT PROFILES

The program will bring together sanitation professionals from diverse technical backgrounds under a common interest in driving the sanitation sector forward. They do not necessarily need to be from a “usual” sanitation background. What the research for this feasibility study has shown is that there is a need for sanitation experts from a range of backgrounds, particularly in urban sanitation.

The regional profile, and WALIS focus, suggests that the ASA should predominantly target professionals addressing the challenges presented by rapid urbanization and fragmentation of the urban sanitation sector. This will be mainly sanitation professionals in utilities and municipalities; however, there will also be some rural crossover, especially as rural sanitation officers become the frontline actors in the rapid growth being experienced in small towns across the region.

Predetermined criteria will be used to select who enters the ASA program, so it will be based on merit/potential based, rather than years of service. There will be a more advanced stream for leaders, and a basic stream for managers who need management and leadership skills (as per the differentiation identified earlier in this report).

This study identified a specific demand for developing leadership skills among a cadre of manager-level professionals responsible for the implementation of sanitation. Nominations for the ASA fellowship will target professionals with some years of experience to allow for a meaningful contribution to the program. However, ASA nominations should not be based purely on years of service or seniority of position, as is the case for much of the CPD available, but instead on a demonstrated passion for sanitation, and potential contribution to the program.

DETAILED DESCRIPTION OF PRODUCTS

FACE-TO-FACE SESSIONS

Face-to-face sessions that last up to one week will take place three times, at the beginning, middle, and end of the program. Bringing students, mentors, and academic partners together will serve multiple purposes, including the opportunity for classroom-based learning, and experiential “knowledge-to-practice” learning (for example, through group work, role play, panel discussions). The face-to-face sessions will also serve as an “incubator for innovation,” with participants encouraged to engage with peers and mentors on challenges they are facing in their work.

Face-to-face sessions will meet technical areas of demand by focusing on leadership skills such as communication, advocacy, analytical skills, and collaboration. However, in order to address some of the limitations with taught courses, the curriculum will be tailored to the needs of the particular intake, and as such, may change from cohort to cohort, as well as with sector needs, whereby new innovations or technologies are introduced.

Face-to-face sessions will be designed and delivered by academic institution staff, with the support of senior ASA fellows and mentors. Credits will be awarded. A credit is the currency to measure student workload in terms of notional learning time required to achieve specific learning outcomes. If the accreditation is done with a university, it means those students who want to enter a master’s or other degree course, will be able to use these credits toward that qualification.

ONLINE CREDITS

Participants will take part in self-guided learning through an online course, made up of a suite of online modules and further reading in order to gain credits toward the program. Online modules will be made available to all interested professionals via open-access courses. However, fellowship program participants will be encouraged to undertake online modules over a set timeframe in order to benefit from online or mobile-based discussion forums.

Online modules will meet technical areas of demand by providing a broad understanding of sanitation challenges faced in the region, with a focus on inequality, urbanization, and the economic aspects of sanitation.

Where possible, online credits will be delivered through partnerships with existing online courses and MOOCs from recognized institutions, however, it is possible that new modules may also need to be developed.

KNOWLEDGE EXCHANGE

Throughout the program, participants will take part in knowledge-exchange activities and field trips by visiting reciprocal institutions or through identification of opportunities for peer learning and collaboration with others in the ASA network as a community of practice.

Knowledge exchange will meet demand by connecting participants to new ideas, approaches, and technologies outside their own way of doing things, and exposing them to alternative solutions that could be replicated or customized to address their own challenges. Participants will be able to maximize opportunities to tailor their learning to their specific needs.

Through different types of knowledge-exchange activities, participants will be able to put their theoretical learning into practice in a way that is directly relevant to their work.

TIMING

The timing of ASA needs to be flexible, however, because of the face-to-face element there have to be some fixed dates for these. There are three one-week face-to-face sessions that are proposed. It should be possible to offer the program either as a six-month, one-year, or 18-month initiative if the one-week face-to-face courses are offered every three months on a rolling program (see Figure 11). In addition, costs will be saved by having the start and end weeks adjacent to one another in the calendar year, so that those teaching from overseas would only travel once. In addition, it would provide the new students an opportunity to interact with the previous students for more cross-learning and networking. Students will be able to select whichever start, middle, and end weeks they want within a maximum of two years for completion. It might also be possible to offer some elements of the program as specialized short courses to other participants.

FIGURE 11: POSSIBLE TIMING FOR THE FACE-TO-FACE ELEMENT OF THE ASA COURSE

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	
Week 1	■						■							■							■
Week 2					■					■								■			
Week 3							■							■							■

POTENTIAL PARTNERS

Of potential institutional partners in the regional, the Water Resources Institute (WRI) in Entebbe stood out as a potential partner for the ASA, as well as the NWSC in Uganda (Kampala).

WRI IN ENTEBBE

The WRI in Entebbe is being established as a center for applied training and applied research, premised on the crosscutting nature of water resources. The WRI will be housed by the directorate of water resources management (WRM) and will collaborate with the private sector, civil society, and NGOs to run a combination of academic and practical courses. They see sanitation as part of water. Based in Entebbe in an existing complex, which also hosts the Nile Basin initiative and Lake Victoria environment management office, they have the infrastructure in place to offer training (meeting rooms, a computer laboratory, and conference rooms). They have memoranda of understanding (MOUs) with nearby accommodations for a reduced rate, but are looking in the future to build accommodations on site.

NWSC IN KAMPALA

NWSC in Kampala already has an office for capacity building—the International Resource Center. NWSC is developing in-house training and partnerships with other institutes (primarily in water), as well as vocational training for all staff as part of their capacity building efforts. As mentioned in the box above, NWSC also has a consultancy arm, and is already carry out a high number of knowledge-exchange activities and learning by doing. The center includes a conference hall, two video conferencing facilities, a high-tech computer laboratory, four lecture rooms, an innovation floor, a business center, exhibition gardens, and a canteen area.

CAVENDISH UNIVERSITY (UGANDA, KENYA, AND ZAMBIA)

Finally, Cavendish University (Uganda, Kenya, and Zambia), and similar private universities that have been formally accredited by the Higher Education Institute in each county, offer potential. Most informants who were interviewed were critical of public institutions for failing to keep pace with the needs of the job market, and the skills that students need. Private universities need to stay current in order to attract students and their funding. Therefore, they are more responsive and have better facilities and governance and finance structures. Cavendish has links to other institutions in the region, including Kenya and Zambia, and are planning to expand.

EAWAG

EAWAG (the Swiss Federal Institute of Aquatic Science and Technology) is an independent research institution linked to the University of Zurich, the University of Lausanne, and several other research institutions. EAWAG's Department for Sanitation, Water, and Solid Waste for Development develops and tests methods and technologies that help the world's poorest access sustainable water and sanitation services (current projects include improving fecal sludge dewatering and resource recovery in Tanzania). In addition to project work, EAWAG publishes and disseminates research and training tools for free. The EAWAG MOOC series, Sanitation, Water, and Solid Waste for Development, is an open-access eLearning program, with courses launched via the Coursera Internet platform.³⁶

WEDC (LOUGHBOROUGH UNIVERSITY)

WEDC is a well-respected education and research institute for developing knowledge and capacity in water and sanitation for sustainable development and emergency relief. WEDC offers education and training opportunities, at the post-graduate level and for professional development. Several distance learning programs are available, for example, low-cost sanitation and water utilities management. Some of these programs are contributing modules to formal training courses offered at WEDC.³⁷ WEDC previously worked with the World Bank Water and Sanitation Program to develop a specific course on Rural Sanitation at Scale, and is currently developing a master's program in collaboration with NWSC in Uganda.

The ASA fellowship program model would have four main partners, providing technical, financial, and administrative support as follows.

Educational Institute	Provides financial administration of the program, curriculum design, teaching, and mentorship, as well as the course organizer. Located in East Africa, accessible to international and domestic students (e.g., Cavendish University or the Water Resources Institute).
Practice Institute	Provides technical curriculum and opportunities for placement with a reciprocal institution in order to gain practical experience and consolidate classroom and online learning in the field through knowledge exchange or shadowing activity (e.g., NWSC International Resource Center).
Distance Learning Institute	Online curriculum development and delivery. Management of online discussion tools. Partner such as EAWAG/WEDC, etc.
Funding Partner	Provides technical and financial support to the program, directly funds key staff and mentors and face-to-face sessions. The long-term aim would be to make ASA financially sustainable by charging for all elements of training, this can only be done if governments, utilities, NGOs, and private sector appreciate and recognize the added value that ASA brings. This is why the fellowship part of the model is so important—so that there is a network of senior professionals with a vested interest in seeing ASA succeed, and who bring gravitas and prestige to ASA.

ACCREDITATION

Besides recognition through a certificate of attendance, most key informants were clear that people like to be accredited for training, and also like to have something independently evaluated as confirmation

³⁶ EAWAG. (2017). *Department sanitation, water, and solid waste for development*.

³⁷ WEDC. (2017). *Professional development*.

that it satisfies specific requirements. Put simply, accreditation is the review of the quality of education offered by an institution or program. When a course or program of study is accredited, it means an official body (such as the government) gives authority to an institution when specific standards are met. In simple terms, it means there has to be a certain standard and quality. Within East Africa, several countries have specific education accreditation institutions or other institutes that include capacity building or training that accredit institutions.

TABLE 3: ACCREDITATION ORGANIZATIONS IN EAST AFRICA

COUNTRY	ACCREDITATION ORGANIZATION
Ethiopia	Ethiopian National Accreditation Office: http://www.ena0-eth.org .
Kenya	KENAS—Kenya Accreditation Service: http://kenas.go.ke . Technical and Vocational Educational Authority http://www.tvetauthority.go.ke .
Rwanda	Higher Education Council: http://www.hec.gov.rw .
Tanzania	Tanzania Commission for Universities: http://www.tcu.go.tz .
Uganda	Uganda National Council for Higher Education: http://www.unche.or.ug .

Currently, institutions have accreditation through different national and international accreditation institutes. For example, Makerere/CDC Uganda PHFP is applying for domestic accreditation first from the National Council for Higher Education, and then once they have had two cohorts graduate they will apply for international accreditation through TEPHINET (Training Programs for Epidemiology and Public Health Intervention Network, based in the United States). And trainees master a set of core competencies that are vital to the practice of public health. It has not been possible to identify anything similar for sanitation currently, but the WALIS project is looking at aspects of accreditation with IHE Delft. An international accreditation system is more desirable to potential candidates, because it provides an opportunity or potential to work in other countries.

COSTS AND FINANCING

The ultimate goal of the proposed model for ASA in East Africa is to become sustainably financed by institutions (public, private, and NGOs) paying for their staff to receive the training. In the short term, this is not feasible and therefore ASA costs will need to be subsidized. A full exploration of costs has not been done for this initial model for ASA in East Africa, because there are many decisions that would need to be made, which will have a high impact on cost. However, information gathered on the cost of other training and approaches taken to finance them, shed some light on ballpark figures and approaches that might be taken.

Using an Accreditation Organization

Although ASA could set up its own accreditation system linked to an East African institution, there may be merit in exploring international accreditation organizations such as the International Accreditation Forum (IAF) (<http://www.iaf.nu/>).

The IAF is the world association of Conformity Assessment Accreditation Bodies and other bodies interested in conformity assessment in the fields of management systems, products, services, personnel, and other similar programs of conformity assessment. Its primary function is to develop a single worldwide program of conformity assessment that reduces risk for businesses by ensuring that accredited certificates are legitimate.

The costs associated with the Makerere/CDC PHFP are estimated at \$50,000 per student per year. These costs cover program staff, mentors, fellows’ stipends, direct expenditures, and overhead. A pro rata rate for the proposed program would be \$12,000, which may still be beyond what an individual or institution would be prepared to fund; but even with modest “bottom-up” budgeting (see next page) the costs will be ~\$8,000 per student.



RICHARD RAPIER/DAI/BURUNDI

TABLE 4: COST PER STUDENT

		UNITS	COST	SUB-TOTAL	ELEMENT SUB-TOTAL
Face-to-Face					
	Return flights	3	500	1,500	
	Accommodations and per diem	18	100	1,800	
	Course fee	3	500	1,500	4,800
Online courses		Multiple	Free	0	0
Knowledge Exchange (2 x 1-week visits within region)					
	Return flights	2	500	1,000	
	Accommodations and per diem	12	150	1,800	2,800
Mentoring: 3 hours per month for max of 9 months (those months where no face-to-face)		27	30	810	810
TOTAL					8,410

Models for mentor remuneration in other programs depends on whether they are mentoring as part of their own job or whether they are employed specifically as mentors. For example, Makerere PHFP has three types of mentors—academic mentors who are university staff, site mentors who are MOH staff, and Secretariat mentors who are specific to the program. Aspen Institute mentors are part-time, paid staff, whereas the Water Resources Institute model in Entebbe proposes to pay a modest stipend rather than a salary to their mentors.

Program costs need to provide for the payment of mentors either as part-time staff (if they are self-employed or retired) or via a stipend or professional fee. Under the ASA fellowship program model, mentors play a key role in guiding and developing leadership qualities in fellows. Throughout the year,

mentors will be expected to support students (face-to-face and remotely by telephone or Skype) and to participate in face-to-face sessions of the program. The level of engagement by mentors required for the program to be successful needs to be matched by the financial remuneration provided.

It is proposed that the ASA program works toward being financially sustainable over a five-year period. If there are sufficient fellow and international accreditation, it is envisaged that organizations will be willing to meet the full costs of having their staff enroll. But, to begin with, if the course can attract sponsorship of 50 percent per student, then the remainder will be met by students or their employers for the first three years, until the program is well established.

Additional costs will be the salary of the course organizer, for a minimum of three years, whose responsibilities will cover:

- Organizing face-to-face courses.
- Organizing alumni network.
- Maintaining database of knowledge-exchange activities.
- Guiding and pairing mentors.
- M&E.
- Accreditation.
- Marketing and promotion.
- Selecting candidates.

There will also be costs associated with publicity and promotion of ASA in the first few years, creating or adapting online courses, and creating materials needed for the face-to-face courses and for formal accreditation.

A gross salary for a course organizer will be approximately \$40,000–50,000 per year. Currently, public sector university professors earn approximately \$36,000; the private sector can earn more, depending on the number of students (for Kenya). In Uganda, a public university professor can earn up to \$48,000, including allowances. If the course organizer is housed at an existing institution, then the estimated costs for the first three years are \$165,000, or \$55,000 per year (see Table 5).

TABLE 5: STAFF AND ADMINISTRATIVE RECURRENT COSTS

	YEAR 1	YEAR 2	YEAR 3	TOTAL
Course organizer salary	40,000	40,000	40,000	120,000
Travel	4,000	4,000	4,000	12,000
Marketing and promotion	5,000	5,000	5,000	15,000
Communications and administration	6,000	6,000	6,000	18,000
TOTAL				165,000

For the course to become sustainable by year five, then by year four the costs in Table 5 need to be partially covered in year four and five and fully covered by year six. For example, if 50 to 60 students a year are passing through the academy by year six, and were each charged an additional \$1,000 for the course, then the course could be sustainable. This is the current price for a two-week residential leadership/management course at the Kenya School of Government (more for international participants). The Makerere short course in WASH is \$500 for fees, but accommodations, flights, and per diem were not included. Thus, the anticipated costs are competitive.

RISKS AND MITIGATION

RISK	IDENTIFIED RISK	RISK PROBABILITY	RISK IMPACT	ACTIONS TO MITIGATE RISKS
1. Strategic Risks				
	Breadth and depth of ASA capacity building initiatives are insufficient to build enough of a critical mass of capacity to deliver results in sanitation.	Low	Medium	It is important for the curriculum (face-to-face, practical, and online) to stay current and utilize emerging learning on what works. ASA must partner with other initiatives and organizations to leverage opportunities for implementation.
2. Partnership Risks				
	Identifying sufficient partner support to ASA.	Medium	Substantial	ASA needs to actively engage other funders to mobilize adequate resources for the program to work.
	Provider institutions do not continue or deliver their part of the training.	Medium	Substantial	ASA continues to identify provider institutions and build their capacity. Good communication systems to be able to provide support to provider institutions and identify challenges they may face.
	Organizations do not choose to send staff to ASA for capacity building.	Low	Substantial	Advocacy and communication of “success stories” as promotion for ASA. Consider subsidies/bursaries/scholarships in initial years to attract high performers who don’t have funding.
3. Financial Risks				
	Failure to identify adequate donor partners.	Medium	Substantial	The purpose of the feasibility studies is to articulate a clear demand for ASA and to show why the recommended approach will add value to the sector. It will be important to share the feasibility reports widely with potential donors and to engage them on the findings.
	Corruption and misuse of funds	Medium	Substantial	Funds disbursed through ASA to institutions will need to use effective procurement and governance systems. Screen institutions prior to signing an MOU.
	Fees are not paid and program fails to become financially sustainable	Moderate	Substantial	In the early years, there will need to be substantial and aggressive promotion and “offers” to attract high-caliber leaders who will then inspire other institutions to send their potential leaders.

CONCLUSIONS AND RECOMMENDATIONS

For SDG 6 to be met in East Africa, there needs to be some changes in the way that sanitation services are delivered. Although most countries have prepared policies and institutional frameworks for sanitation, few countries can translate finances into services, with several sector blocks along the sanitation delivery pathway. In particular, institutions need to focus on services for the poor and reducing inequalities.

On the whole, the sector lacks the required quantity and quality of leadership needed to catalyze service provision in pursuit of meeting SDG 6. Although technical training is sufficient, few organizations have the requisite structures and systems in place to build sanitation leadership. Two types of leaders are needed for sector progress. Leaders are needed that possess innate characteristics of leadership and have the vision, drive, and passion to overcome the many hurdles the sector faces, and leader managers are needed to galvanize the teams around them to deliver and implement the vision. The sanitation pathway to leadership is not clear and not aspirational for many. Good leaders tend to leave the sector or use it as a stepping stone to other careers; this leaves few leaders for those starting out in their careers to emulate.

Although there is a range of institutions offering technical and leadership training, the quality is variable and most are not quick enough to adapt to the changing needs of the sector. Few institutions offer opportunities for practical experience, which most sector leaders report is a failing.

Given the complexity and interrelatedness of the issues, the ASA needs to address not only the quality of the training and the need for practical experience and learning-by-doing, but also the issues of making a career in the sector more attractive. This can be done through a combination of mentoring and fellowships, which encourage retention in the sector and peer-to-peer learning and knowledge exchange. Having well-known sector leaders as fellows in the ASA will help to make the academy more aspirational, as well as providing the vital element of mentorship, which great leaders (within and beyond the sector) report as having been crucial in the formative years of their careers. It is this combination of prestigious mentors, up-to-date curriculum, practical experience, accreditation, and the opportunity to “join the club” that will in turn help to attract fee-paying clients. The aim is that within five years, ASA can be funded entirely through fees.

Recommendations for next steps include following up with key provider institutions that will be responsible for different components. The recommendation of this report is to establish ASA in Uganda, because there are already institutions and organizations that are willing to partner and can provide the necessary aspects of the course. The WRI can provide some of the technical content, as well as facilities for hosting students. Cavendish University could provide the accreditation system and other components of the core curriculum. Working with a university and/or accreditation institution to ensure that all units gain credits (which could potentially be put toward a master’s degree or other qualification) will be necessary. The practice institute could be the NWSC in Kampala, which has a resource center and already has models for knowledge exchange and on-the-job training. Online elements can be developed by EAWAG or WEDC.

Funding for the development of the full proposal, in addition to support for operations for the first five years (gradually diminishing) would need to come from fundraising efforts.

It is advised that the recommended institutions be brought together in a joint meeting, which could be facilitated by consultants, to iron out the roles and responsibilities and to finalize budgets and financing. However, a course coordinator position would need to be funded full time for three to five years before transitioning that to the umbrella institution. One institution will need to take responsibility for “housing” and incubating ASA. That institution will need to have good governance, finance, and oversight.

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ANNEX A: LIST OF PEOPLE INTERVIEWED

PERSON/ORGANIZATION	POSITION/INSTITUTION	CONTACT INFORMATION
ETHIOPIA		
Gulilat Birhane	Senior Water and Sanitation Specialist, World Bank	geshetu@worldbank.org
Jane Bevan	Rural WASH Manager, UNICEF	jbevan@unicef.org
Zufan Damtew	Director Health Extension and Primary Health Service Directorate, Federal MOH	hephsdirector.fmoh@gmail.com
KENYA		
Rosemary Kijana	HR Director, Nairobi Water and Sewerage Company	-
Samuel Parteri	HR Director, Nol Turesh Water Company	sparteri@nolturesh.co.ke
Samuel Muthinji (Chairman), Mohammed Duba (Sec General), Daniel Okwara (Treasurer)	Association of Public Health Officers of Kenya (APHOK)	s_muthinji@yahoo.com
David Kuria	Chief Executive (and Aspen New Voices Fellow), Africaqua	kuria@africaqua.org
RWANDA		
Anita Gaju	Independent Consultant (previous director of utility and regulator)	anitagaju@yahoo.com
SOMALIA		
Chantal Richey	Senior Water and Sanitation Specialist, World Bank	crichey@worldbank.org
Muna Dalmar	Director General, Ministry of Environment, Puntland	dgmunadalmar@gmail.com
Hibo Hashi	M&E Officer, Ministry of Environment, Somaliland	hibohashi7@gmail.com
TANZANIA		
Kaposo Mwambuli	Director of Policy, Research, and Sector Engagement, WaterAid	kaposomwambuli@wateraid.org
Anyitike Mwakitalima	Coordinator of the National Sanitation Campaign, MOH	anyitike76@yahoo.co.uk
Richard Kimwaga	Senior Lecturer, Water Resources Engineering Department, University of Dar es Salaam	-
UGANDA		
Harriet Nattabi	Water and Sanitation Specialist, World Bank	hnattabi@worldbank.org

PERSON/ORGANIZATION	POSITION/INSTITUTION	CONTACT INFORMATION
Callist Tindimugaya	Environmental Management and WASH, Kampala Capital City Authority	callist.tindimugaya@mwe.go.ug
Cate Nimanya	Country Director, Water for People	cnimanya@waterforpeople.org
Cavendish University Staff	Vice Chancellor, Acting Vice Chancellor, Course Organizer (Department Head), Cavendish University	jmugisha@cavendish.ac.ug ktirima@cavendish.ac.ug bkibwika@cavendish.ac.ug
Najib Lukooya	Environmental Management and WASH, Kampala Capital City Authority	nbateganya@kcca.go.ug
Rose Kaggwa	Director, Business and Scientific Services, NWSC	rose.kaggwa@nWSC.co.ug
Ario Alex Riorexus	PHFP Secretariat, Uganda National Institute of Public Health, MOH	riorexus@musph.ac.ug
OTHER		
Kirsten de Vette	Learning and Capacity Development officer, IWA	kirsten.devette@iwahq.org
Lydia Zigomo	Regional Director East Africa, WaterAid	lydiazigomo@wateraid.org
Rosemary Rop	Water and Sanitation Specialist, World Bank	rrop@worldbank.org
Dennis Mwanza	Deputy Director, Urban Sanitation Markets, Bill & Melinda Gates Foundation	dennis.mwanza@gatesfoundation.org
Fiorella Polo	Water Safety team, previously SWA Secretariat, UNICEF	fpolo@unicef.org
Rachel Harvey	Aspen Institute, New Voices Fellowship Mentor	-
FOCUS GROUP DISCUSSIONS		
Cavendish University—environmental health or public health bachelor's degree undergraduates		
Kenya Medical Training College—third-year environmental health diploma students		

ANNEX B: INTERVIEW GUIDES

Country/Regional Contacts

1. Institutional Set-Up for Sanitation in the Country

What is the institutional set-up for sanitation in the country?

How are utilities structured?

2. Leadership Qualities

What do you think the qualities of a good leader are?

What do you think the qualities of a good sanitation leader are (are they different)?

What would be the ideal balance between technical knowledge/competence on sanitation, and management/leadership skills?

What skills and capacities do you need to start with on the path to becoming a leader in sanitation? Are these skills taught or acquired from experience?

3. Sanitation Leadership in Country

Who are the official sanitation leaders in the country? What government/utility positions are considered “leadership positions”?

Are there any unofficial sanitation leaders in the country? If so who? Why are they considered leaders?

Thinking about good leaders in the sanitation sector – what are their positive qualities? Do you think these qualities are as a result of education or experience or both?

Is there anything missing from sanitation leadership? Are there gaps in capacity?

Which other sectors are considered to have good leadership in the country (e.g. health, education)? Why? How does this compare to sanitation?

4. Pathways to Sanitation Leadership Roles

What fields do current sanitation leaders come from (government and utility)? What is their background?

Do you think it is possible to become a sanitation leader without this background?

Is there a clear career pathway to sanitation leadership positions? Do you think people who enter at lower levels can see that pathway?

Do you think career pathways more clear/easier to navigate in utilities or government departments? Why?

Do you think working in the sanitation sector is viewed as aspirational? If not why not?

Do talented staff stay in the sector? If not, where do they go? What could motivate them to stay?

5. Sanitation/Leadership/Sanitation Leadership Training

What training is currently available for sanitation specialists? What do you think about it? Why?

Is there leadership training available for sanitation specialists? If so who? How are candidate selected?

Which education institutes offer courses on sanitation or leadership, or both?

What type of organization/structure can provide the skills/capacities that are needed? Can it be done by one organization?

Do you think people have experience of non-residential training formats such as online courses, or mentoring? How do you think these are seen/perceived?

How important do you think accreditation/certification is generally in the sector? Do you think it is different for leaders?

6. Snowball Contacts

Who else do you think we should talk to for insights on this issue?

If we wanted to interview sanitation leaders in your country who would you recommend (rural and urban sanitation leaders)

Sanitation Leaders

1. Understanding Your Position and Organization

Can you tell us a little bit about your institution and how it is organized?

2. Leadership Qualities

What do you think the qualities of a good leader are?

What do you think the qualities of a good sanitation leader are (are they different)?

What would be the ideal balance between technical knowledge/competence on sanitation, and management/leadership skills?

3. Pathways to Sanitation Leadership Roles

Can you tell me about your career path? How did you get where you are today?

- Have you worked outside the sanitation sector?
 - Have you worked outside government/utility?
 - Have you worked outside the country?
-

What is your formal training?

Have you received any non-formal training? For example, have you taken any short courses, distance learning, online learning, learning exchanges?

If so what do you think about them?

Who would you say has mentored you along your career?

On balance do you think your leadership skills and qualities are as a result of education or experience or both?

4. Aspirations

Five years ago, would you say that you aspired to be in the position you are in now?

Where do you see yourself in 5 years' time?

- Will you still be working in sanitation?
-

What advice would you give to someone in the early stages of their career who wishes to navigate a career pathway to a sanitation leadership position?

- What formal/non-formal training should they get
 - What experiences should they get? And how?
-

HR Staff

1. Leadership Posts

Which sanitation positions are considered as leadership posts?

Are there stand alone sanitation posts in your company or does responsibility fall under a broader role (eg technical director)

Are there minimum educational requirements for these posts? If so what are they?

- Subject/field, qualification level
- Take each post from 2b in turn

Are there any other requirements for these posts -for example years of experience?

- Take each post from 2b in turn

Can you share with us the generic job descriptions or TORs for these posts?

2. Recruitment

How are staff appointed to leadership posts? Is it normally through an open recruitment or internal promotion?

Are staff from outside the department, or outside the sector recruited to leadership posts?

If so, which other departments or sectors do they come from? If not, why not?

Do you get applicants from outside the water/sanitation industry applying for jobs? If so where do they come from?

Is it easy to fill sanitation posts with good candidates that meet the criteria? Why is that?

In addition to fulfilling the qualifications requirements, what are the key qualities you are looking for when recruiting for a leadership post?

Do you think these qualities come from education, or experience, or both?

What advice would you give to someone in the early stages of their career who wishes to navigate a career pathway to a sanitation leadership position?

3. Professional Development

Is there a capacity development strategy for sanitation (or in general)? If yes, could you share a copy with us?

How is staff capacity development planned and implemented? Who decides which staff go for training? Who decides which training are required (is it self-selected)

How is capacity development financed? Which budget is available? Can you estimate how much is available per staff?

For sanitation staff – which types of capacity development opportunities are available?

- Which are the most popular courses?
- Are leadership development programs available? Is so which?
- Which formats are preferred?

Do staff also participate in non-formal training or self-directed learning?

(would non-formal training/online courses etc be considered on a cv of an applicant for a higher position)

Is there a formal mentorship program in place? If not do staff find their own mentor?

Which types of capacity development counts toward CPD? Who decides this?

- Which courses are accredited?
- Can online training count toward CPD?
- Are mentorship/learning exchange opportunities counted?
- Do you have a list of approved CPD that you could share?

Are certain courses/credits required for progression to more senior positions? If so:

- Who decides this?
- Which courses/credits are required?
- How does a staff member access that course?

Are certain experiences required for progression to more senior positions? If so, what?

ANNEX C: SANITATION LEADERSHIP ISSUES ADDRESSED BY THE PROPOSED ASA MODEL

ISSUE	PROBLEMS IDENTIFIED	HOW THE PROPOSED ASA MODEL ADDRESSES THE PROBLEM
Sanitation East Africa	Lack of progress	Indirect. These issues, while not directly addressed by having a sanitation leadership development program, will be influenced by having a stronger sanitation leadership in the region which is capable of raising the political profile of sanitation, securing sanitation financing, and driving the sector.
	Inadequate finance	
	Lack of sanitation job market	
	Inequalities in coverage and progress (poverty)	The program will focus on developing leaders who understand the complexity of providing sanitation in a context of inequalities, and fragility.
	Fragility	Online modules will meet technical areas of demand by providing a broad understanding of sanitation challenges faced in the region with a focus on inequality, urbanization and the economic aspects of sanitation.
	Urbanization	As above, course content will cover urbanization and the sanitation challenges presented by rapid growth of urban (informal) settlements. Program participants profile: Mainly sanitation professionals in utilities and municipalities, however, there will also be some rural crossover, especially as rural sanitation officers become the frontline actors in newly emerging small towns.
Leadership Inadequacies	Leadership comes from experience rather than technical knowledge	Skills taught will be consolidated outside the classroom through the opportunities for real-time experience, and the linkages to experienced sector mentors. Structured opportunities for experiential learning and collaboration will be provided for practical application of taught skills. These opportunities will be based on technical problem solving.
	Sanitation is not aspirational	Throughout the fellowship program, participants will be attached to mentors for the coaching and support. The ASA fellows membership program is designed to raise professional recognition of ASA, much like membership in a professional body, as well as provide a professional network that members can tap into. Membership as an ASA fellow will provide access to a prestigious “club” that links sanitation professionals to inspirational individuals that they look up to.
	Sanitation career path is unclear and talent is not fast-tracked to leadership posts	Participants to the fellowship program will be nominated—either by their organizations or by others in the sector. It is hoped that the ASA fellowship program will become widely recognized (both officially through accreditation and also through professional “buy-in”) as producing sanitation professionals capable of leading the sector.
Training Limitations	Few sanitation-specific courses	Online modules will provide a broad understanding of sanitation challenges faced in the region with a focus on inequality, urbanization, and the economic aspects of sanitation. Practicals will be based around technical problem solving.
	Leadership is not included in technical courses	Face-to-face sessions will focus on leadership skills such as communication, advocacy, analytical skills, and collaboration.
	Existing courses are slow to adapt to new approaches	Opportunities for peer learning and knowledge exchange, as well as practical experiential learning, will expose participants to new approaches and technologies.

ISSUE	PROBLEMS IDENTIFIED	HOW THE PROPOSED ASA MODEL ADDRESSES THE PROBLEM
	Existing courses do not reflect regional complexities	As above, course content will reflect the complexity of providing sanitation in a context of inequalities, pockets of fragility, and urbanization.
	Graduates have limited practical experience	Skills taught will be consolidated outside the classroom through the opportunities for real-time experience, and the linkages to experienced sector mentors. The course will provide opportunities for experiential “knowledge-to-practice” learning (e.g., through group work, role play, panel discussions).

ANNEX D: EAST AFRICA SANITATION COURSES AND CONTENT

INSTITUTE	COURSE	QUALIFICATION	LENGTH	CONTENT							
				SANITATION	HEALTH/ HYGIENE PROMO	WATER SUPPLY	ENGINEERING	ENVIRON- MENT	WRM	LEADERSHIP	MANAGE- MENT
Master's Degree											
Makerere University	Civil Engineering	M.Sc.	2 years	★		★			★		★
University of Nairobi	Environmental and Biosystems Engineering	M.Sc.	2 years	★		★	★				★
University of Nairobi	Civil Engineering	M.Sc.					★		★		★
University of Nairobi	Public Health	M.P.H.			★			★		★	★
Dar es Salaam University	Integrated Sanitation Management	M.I.S.M.	1.5 years	★	★	★		★		★	★
Bachelor's Degrees											
Makerere University	Environmental Health Science	B.Sc.	3 years	★	★	★				★	★
Makerere University	Environmental Science	B.Sc.	3 years	★				★	★		★
Cavendish University	Environmental Health Sciences	B.Sc.	3 years	★	★	★		★		★	★
Cavendish University	Public Health	B.Sc.	3 years		★			★		★	★
University of Nairobi	Environmental and Biosystems Engineering	B.Sc.	5 years	★			★	★			★
University of Nairobi	Civil Engineering	B.Sc.					★				★

INSTITUTE	COURSE	QUALIFICATION	LENGTH	CONTENT								
				SANITATION	HEALTH/ HYGIENE PROMO	WATER SUPPLY	ENGINEERING	ENVIRON- MENT	WRM	LEADERSHIP	MANAGE- MENT	
KMTC	Environmental Health Sciences	Diploma	3 years									

Note: “leadership courses” include leadership and communication skills, and analytical courses such as WASH political economy, WASH policy, planning, and financing. ★ Indicates more than one module is dedicated to leadership.

Short Courses and Online Courses

INSTITUTE	COURSE	QUALIFICATION	NO. OF WEEKS	CONTENT				
				SANITATION	WATER SUPPLY	WRM	HYGIENE	LEADERSHIP SKILLS**
Short Courses								
Makerere University	WASH Short Course	Certificate	8 (4 residential + 4 field)	★	★	★	★	★
Netwas	Integrating CLTS Tools in Rural WASH	-	1	★				
Netwas	PHAST	-	2	★				
Kenya Water Institute	O+M of Waste Water Treatment and Disposal Systems	-	1	No info				
Kenya Water Institute	O+M of Waste Water Collection Systems	-	1	No info				
Online Courses								
University Manchester	Water Supply and Sanitation Policy in Developing Countries	Statement of Accomplishment	6 (8–10 hours/week)			★	★	★
WEDC	Rural Sanitation at Scale	-	0.5	★				
EAWAG	Planning and Design of Sanitation	Statement of Accomplishment	5 (6 hours/week)	★				

	Systems and Technologies							
WSP	Sanitation Marketing Toolkit	-	0.5	★★★★★				

** Includes analytical courses such as WASH political economy, WASH policy, planning, and financing.

ANNEX E: LEADERSHIP DEVELOPMENT PROGRAM EXAMPLES IN EAST AFRICA

INSTITUTE	SUPPORT FROM	TARGETS AND FORMAT	INFO
<p>UONGOZI Institute of African Leadership for Sustainable Development (Dar es Salaam)</p>	<p>Independent government agency established by the Government of Tanzania with support from the Government of Finland</p>	<p>Participants Tanzanian and African current and future leaders. Strategic and operational leaders from public and private sectors, and civil society organizations. Various 1–3 day workshops under 3 competencies (see info column).</p>	<p>Examples of workshops currently available under 3 competencies:</p> <p>1. Making strategic choices -Leadership for sustainable development -Foresight and visioning -Leadership for results</p> <p>2. Leading people and resources -Leading change -Leader as a coach -E-leadership orientation for parliamentarians -Induction Program for strategic leaders in public service</p> <p>3. Excelling in personal qualities -Advanced strategic communications -The art of public speaking -Effective written communications -Ethical and accountable leadership</p>
<p>Young African Leaders Initiative – East Africa (Nairobi)</p>	<p>USAID, MasterCard Foundation, Deloitte Housed within Kenyatta University</p>	<p>Participants Merit-based selection of 18–35-year olds from 14 East African Countries. The 12-week program includes 4 weeks of residential and 8 weeks of distance from home country.</p>	<p>The Program follows three tracks of study:</p> <ul style="list-style-type: none"> -Business and entrepreneurship -Civic leadership -Public management <p>In addition to the curriculum, the program offers opportunity to work in groups, work with mentors, form partnerships and grown an alumni network.</p>
<p>International Water Center Water Leadership Program (Note: This program is not region specific)</p>	<p>Swedish International Development Cooperation Agency</p>	<p>Target participants: Project and middle managers. Minimum three years' experience in the water industry. Desire to complement their technical and management skills with advanced leadership capabilities. Previous participants are mainly from water (rather than Sanitation), majority from Australia, but some from SE Asia. 9-month distance/online learning with 5 days face-to-face in Brisbane.</p>	<p>The program helps emerging leaders develop the abilities they need to exert influence, drive change, and advance challenging integrated water management projects—abilities associated with the most effective integrated water management leaders. Program methods include developing and applying leadership development plans, matching students with coaches, mentoring from experienced executive leaders, and online discussion with peers.</p>

ANNEX F: JOINT MONITORING PROGRAMME (JMP) GRAPHS AND ETHEKWINI COMMITMENT MONITORING 2015

FIGURE 12: JMP COVERAGE TRENDS FOR SELECTED COUNTRIES IN EAST AFRICA

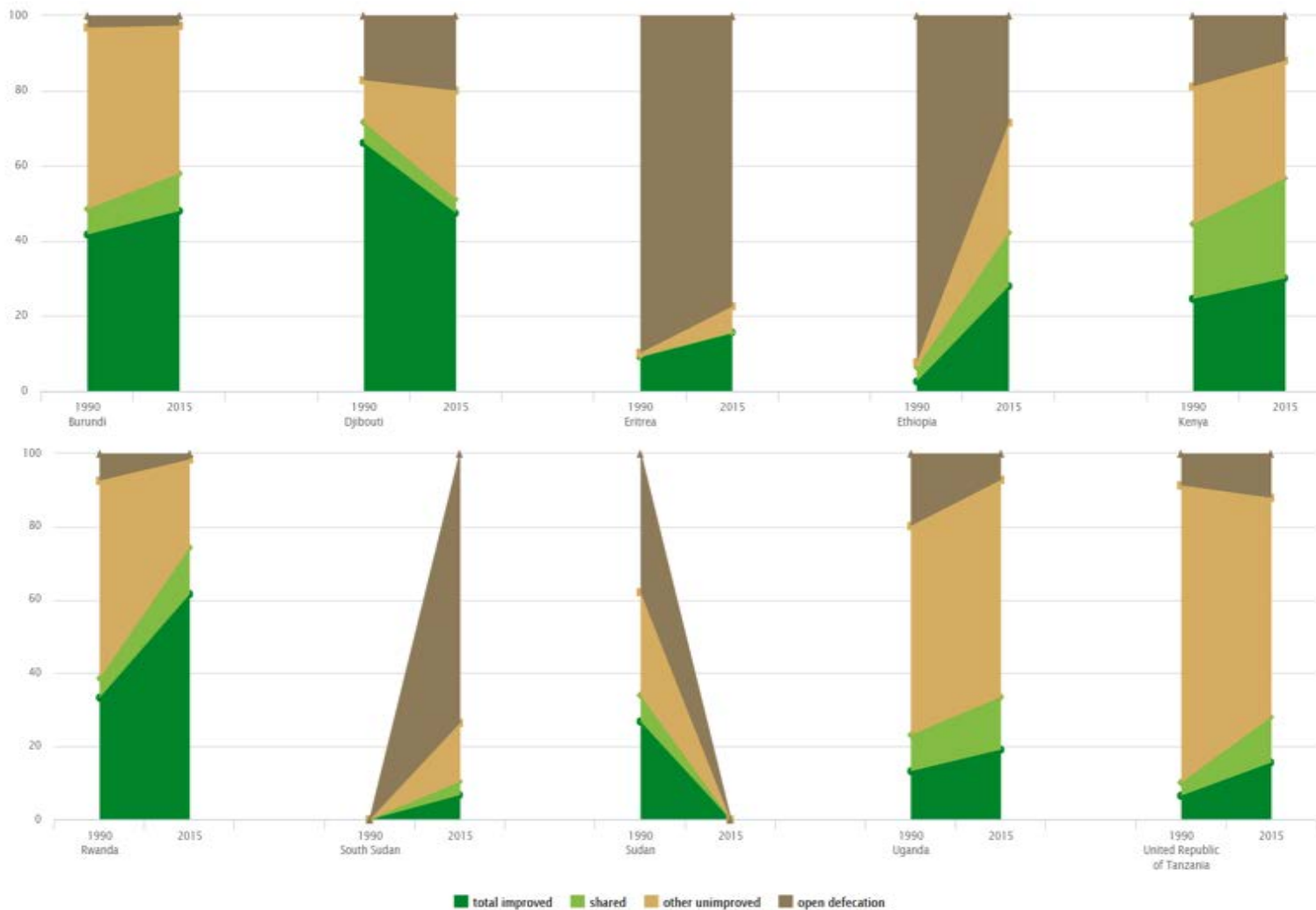


FIGURE 13: PROGRESS TOWARD THE ETHEKWINI COMMITMENTS

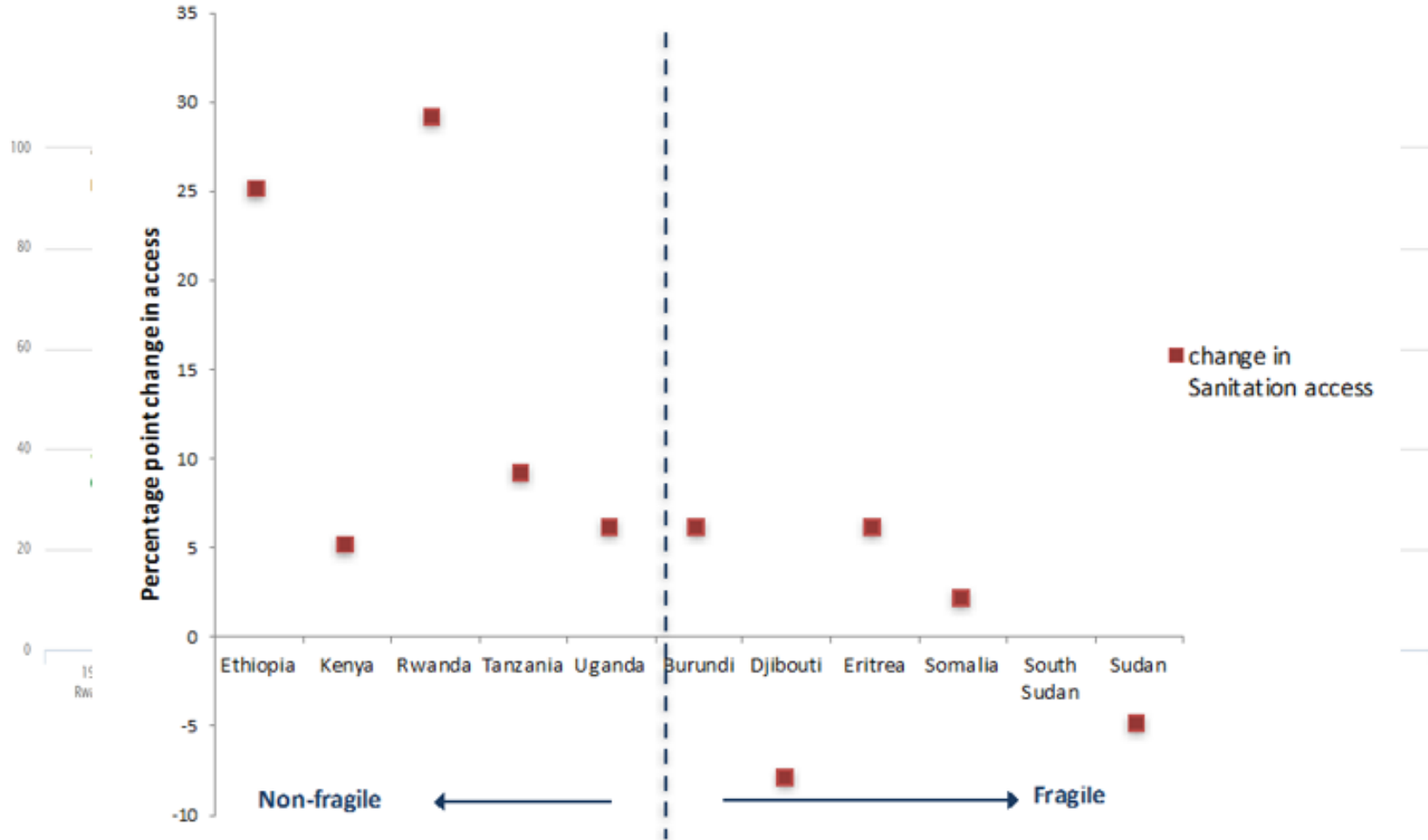
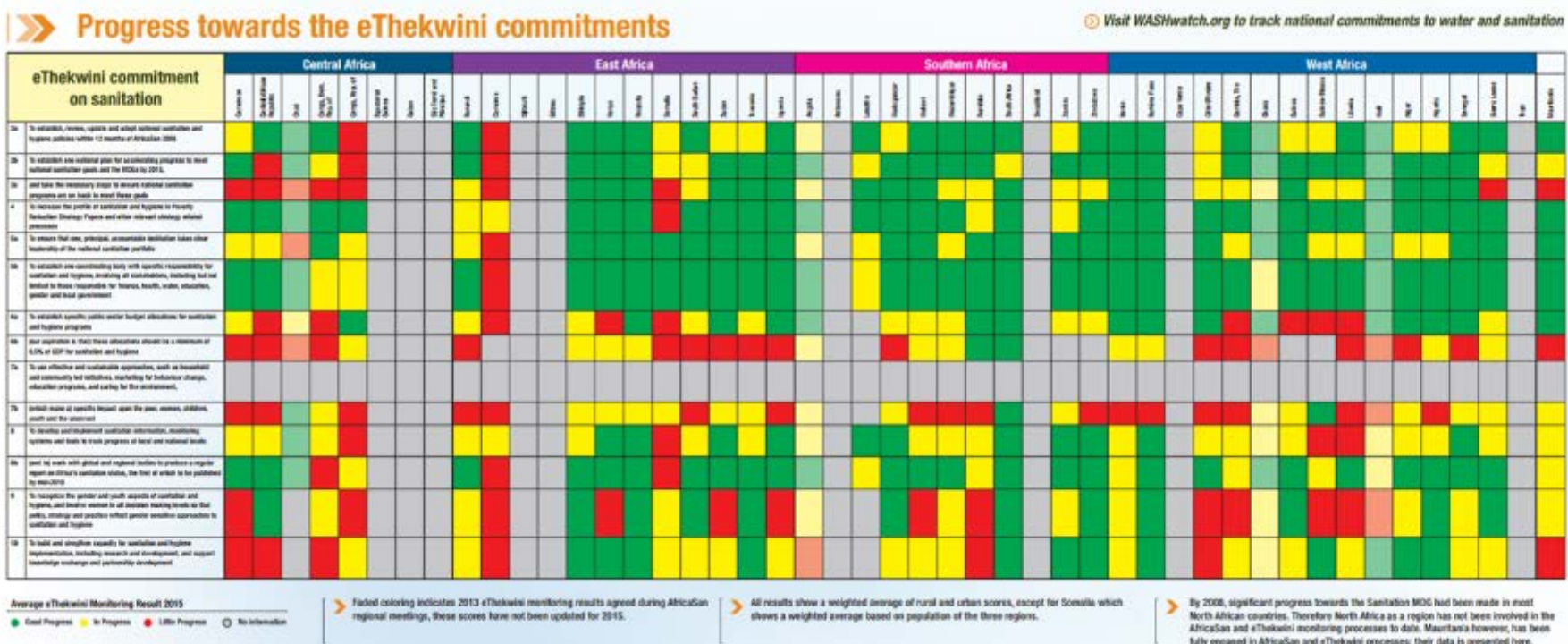


FIGURE 14: CHANGE IN ACCESS TO SANITATION | 1990–2015 BY FACILITY



Source: JMP, 2015.

ANNEX G: COUNTRY POLICIES AND STATUS IN WASH FINANCING

	EXISTENCE OF GOVT. AGREED WASH FINANCING PLAN	WASH FINANCING FOCUS ON DISADVANTAGED GROUPS	SUFFICIENT FUNDS TO MEET THE SDGS	ABSORPTION OF WASH FUNDS
Yes/Good Progress	Ethiopia, Rwanda	Sudan		Burundi, Ethiopia, Rwanda, Tanzania
Moderate Progress	Burundi, Uganda, Eritrea, Sudan, Tanzania	Eritrea, Ethiopia, Uganda,	Kenya, Rwanda,	Eritrea, Kenya, Uganda,
No/Poor Progress	Kenya, South Sudan	Burundi, Kenya, Rwanda, South Sudan, Tanzania	Burundi, Eritrea Ethiopia, South Sudan, Sudan, Uganda, Tanzania	South Sudan, Sudan

(Source: GLAAS, 2014)

ANNEX H: STRATEGIES TO ADDRESS IDENTIFIED GAPS IN SANITATION HR

The following table summarizes the 2014 GLAAS survey questionnaire responses regarding country strategies to address sanitation HR gaps.

COUNTRY	RESPONSES
Eritrea	<p>Upgrading of qualifications of existing staff.</p> <p>Recruitment of new qualified staff.</p> <p>Training to WASH committees in rural areas.</p>
Ethiopia	<p>Recent expansion of the universities from almost non-existent to 32 universities opportunity for HR development.</p> <p>Some of the universities have training programs for environmental health officers and water professionals.</p> <p>The technical vocational and educational centers are for training and deployment of health extension workers.</p> <p>The government has arranged the upgrading mechanism from low level of education to second degree levels for sanitation and hygiene professionals and actors.</p>
Kenya	<p>The country has identified capacity gaps and training opportunities.</p> <p>Approved personal development.</p> <p>Benchmarking locally and internationally.</p>
Rwanda	<p>Capacity building programs for WASH sector developed.</p> <p>Capacity building to manage water and sanitation infrastructure, resources, and systems.</p> <p>Training of 800 technicians on the job and 235 senior professionals.</p>
South Sudan	<p>Establishment of a training center within the country.</p> <p>Training abroad.</p> <p>Recruitment of technical assistance personnel and attachment/secondment to projects, etc.</p>
Sudan	<p>Existing HR plan of action, but not covering all areas.</p>
Uganda	<p>Ministry of Water and Environment has taken over recruitment of the required staff to send them to the districts to address low staffing levels in local governments.</p> <p>The Ministry of Water and Environment frequently organizes capacity building training in all the WASH fields to uplift capacity of the private sector, NGOs, and CBOs for better service delivery.</p>
United Republic of Tanzania	<p>Existence of national strategy document for health (including water and sanitation).</p> <p>Existence of standardized staffing level.</p> <p>Public Service Recruitment Authority has a goal for recruiting new staff in deficit.</p> <p>Existence of capacity building plan for HR.</p>

U.S. Agency for International Development
1300 Pennsylvania Avenue, NW
Washington, DC 20523
Tel: 202-712-0000
Fax: 202-216-3524
www.usaid.gov