

D.6.4. Lessons Learned from recent sanitation projects and initiatives in Africa

ICLEI – Local Governments for Sustainability – Africa

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Revision June 2012



ACCESSanitation: Accelerating City-to-City Exchange for Sustainable Sanitation

EuropeAid – Non State Actors and Local Authorities in Development
EuropeAid/127764/C/ACT/TPS

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1. Acronyms

ACCESSanitation	Accelerating City to City Exchange for Sustainable Sanitation
AfDB	African Development Bank
ASKNet	African Sanitation Knowledge Network
AWF	African Water Facility
BGS	British Geological Survey
BOATA	Ouest-Africiand'AppuiOrganisationnel et de Technologies Appropriées
BOKU University	University of Natural Resources and Life Sciences
CBO	Community Based Organisation
CLARA	Capacity-Linked Water and sanitation for Africa's Peri-urban and Rural Areas
CREPA	Centre Régional pour l'Eau Potable et l'Assainissement à faiblecoût
CREPAPE	Centred'Etudes pour la Promotion, l'Aménagement et la Protection de l'Environnement
DPLG	Department of Provincial and Local Government
DWAF	Department of Water Affairs and Forestry
EAC-LVBC	East African Community – Lake Victoria Basin Commission
EAWAG	Swiss Federal Institute of Aquatic Science and Technology
EC	European Commission
EcoSan	Ecological Sanitation
ECWP	Ethiopia Country Water Partnership
ESCA	EcoSan Club Austria
ESF	EcoSan Services Foundation
GIS	Global Information System
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit ¹
HIP	Hygiene Improvement Project
IDR	Institute of Development Research
IDS	Institute of Development Studies
IEES	International Ecological Engineering Society
IRC	International Water and Sanitation Centre
IWA	International Water Association
IWMI	International Water Management Institute
IWRM	Integrated Water Resources Management
JMP	Joint Monitoring Programme
KNUST	Kwame Nkrumah University of Science and Technology
LVWATSAN	Lake Victoria Water and Sanitation
MDG	Millennium Development Goal
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding
MSF	Multi-stakeholder Forums
MTM	Commune de Matam
NETSSAF	Network for the Development of Sustainable Approaches for Large Scale Implementation of Sanitation in Africa

¹More recently the GTZ has joined together with other organisations into the GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit. For the purposes of this report, given that it was referred to as the GTZ in these projects, we have kept GTZ.

NETWAS	Network for Water and Sanitation
NGO	Non-Governmental Organization
ODI	Overseas Development Institute
PIU	Project Implementation Units
RiPPLE	Research-inspired Policy and Practice Learning in Ethiopia and the Nile Region
ROSA	Resource Orientated Sanitation concepts for peri-urban areas in Africa
SEI	Stockholm Environment Institute
SLU	SverigesLantbruksuniversitet
SMEs	Small to Medium Size Enterprises
SNNPR	Southern Nations and Nationalities Peoples Region
SSA	Sub-Saharan Africa
SSWPs	Strategic Sanitation Waste Plans
SuSanA	Sustainable Sanitation Alliance
TAF	Technology Assessment Framework
TREND	Training, Research and Networking for Development
TTZ	Technology Transfer Centre
TUH	Hamburg University of Technology
TUT	Tampere University of Technology
UAA	UniversitéAbobo-Adjamé
UN	United Nations
UN-HABITAT	United Nations Human Settlements Programme
UNICEF	United Nations Children’s Fund
UNEP	United Nations Environment Programme
USAID	United States Agency International Development
USD	United States Dollar
VIP	Ventilated Improved Pit
WASH	Water, sanitation and hygiene
WASHTech	Water, Sanitation and Hygiene Technologies
WATSAN	Water and Sanitation
WHO	World Health Organisation
WIN-SA	Water Network South Africa
WSP	Water and Sanitation Program
WSS	Water and Sanitation Sector
WUA	Water User Associations
ZAR	South African Rand

2. Introduction

ACCESSanitation – Accelerating City-to-City Exchange for Sustainable Sanitation - is a three year European Commission (EC) funded project started in December 2009 and operating in three regions, namely: South Asia (India), Southeast Asia (Philippines) and Sub Saharan Africa. The project aims to: i) enable local authorities to promote and initiate sustainable sanitation² solutions, thus improving health conditions, alleviating poverty, fostering the local economy and increasing food security; ii) develop tailor made City Sanitation Plans; and iii) increase awareness and transfer good practices highlighting the importance of sustainable sanitation for poverty alleviation and sustainable development among local stakeholders in Asia and Sub-Saharan Africa. ACCESSanitation aims to make use of existing frameworks and projects to ensure that activities and results are embedded into national strategies and policy goals.

According to the United Nations, more than one in six people – 0.9 billion – do not have access to “improved” drinking water and around 2.6 billion, including almost one billion children, live without basic sanitation³. Globally, diarrhoea is the leading cause of illness and death, with the main contributing factor in 88 per cent of diarrhoeal deaths being attributed to a lack of access to basic sanitation facilities, coupled with inadequate availability of water for hygiene and unsafe⁴ drinking water. While access to water supply and sanitation in Sub-Saharan Africa has been steadily improving over the past two decades, the region still lags behind all other developing regions. This challenge is further aggravated by increasing levels of urbanisation – currently around 40% – in a continent where six out of ten urban residents live in slum like conditions (peri-urban and informal settlements). Recent figures from the UNICEF & WHO Joint Monitoring Programme, 2010 Update on Progress on Sanitation and Drinking Water⁵ indicate that 546 million people within Sub-Saharan Africa have no access to safe sanitation. Furthermore, with increasing population growth it is estimated that the number of people practicing open defecation in the region has increased by 33 million⁶. Latest trends and analysis from UNEP⁷ in 2010 indicate that only nine countries in Africa are expected to attain their targets for the sanitation Millennium Development Goal’s (MDGs) (Figure 1).

As a project deliverable for ACCESSanitation, ICLEI – Local Governments for Sustainability – Africa was tasked with producing a report that would serve to inform and contribute to the actions undertaken within the ACCESSanitation project. More specifically the intent is to foster and promote exchange of good practice between the project regions namely South Asia, South East Asia and Sub-Saharan Africa, in respect to urban sustainable sanitation. The target audience for this document is mainly the project partners undertaking the

² In the context of ACCESSanitation the partners adopted the Sustainable Sanitation Alliance (SuSanA) definition of sustainable sanitation whereby a sanitation system is considered sustainable when it is economically viable, socially acceptable, technically and institutionally appropriate in addition to protecting the environment and natural resources present.

³ Basic sanitation defined as proportion of the population utilising ‘improved sanitation’ in line with the Joint Monitoring Programme, 2010 assessment⁵

⁴ Safe drinking water being defined in line with the WHO Drinking-water quality guidelines, wherein specific values for microbial contamination and chemical hazards are set, however these also consider national guidelines and socio-economic contexts⁵

⁵ JMP 2010. Progress on Sanitation and Drinking-water: 2010 Update. WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation. Available at: http://www.unwater.org/downloads/JMP_report_2010.pdf (Accessed 29.03.2011).

⁶ UNICEF & WHO. 2012. Joint Monitoring Programme: Progress on Drinking Water and Sanitation 2012 Update.

⁷ JMP 2010. Progress on Sanitation and Drinking-water: 2010 Update. WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation. Available at: http://www.unwater.org/downloads/JMP_report_2010.pdf (Accessed 29.03.2011).

ACCESSanitation project, namely: ICLEI European Secretariat, ICLEI South Asia Secretariat, ICLEI Southeast Asia Secretariat, ICLEI Africa Secretariat, Xavier University and EcoSan Services Foundation (ESF) in collaboration with seeconsult. Via the partners, the participating cities are also expected to benefit. Entitled “Lessons Learnt in African Sanitation Initiatives and projects”, the report presents key lessons learnt from both current and recently completed sustainable sanitation initiatives in Africa.

It is envisaged that the lessons learnt identified within this document will serve to better inform the project partners of key obstacles, challenges and lessons that have been observed in previous programmes and contribute to targeted and improved interventions within the ACCESSanitation project.

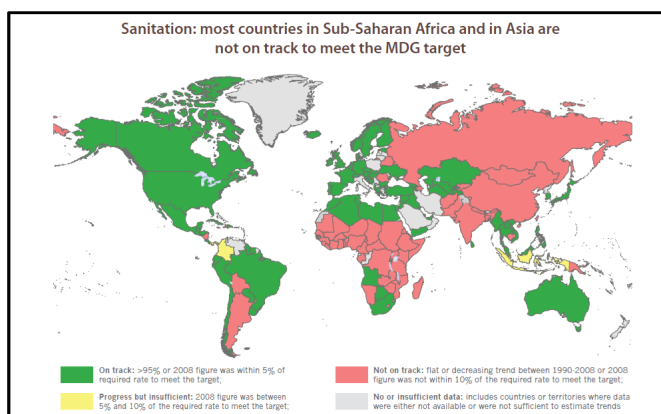


Figure 1. Sanitation: Progress towards the MDG targets, data from 2008⁸.

Methodology

Recent and current sanitation projects, whether government or donor funded, are key sources of institutional knowledge within the sector. This document was developed following a detailed desktop review by the authors of a range of projects – analysing relevant project documentation.

The format for the review of each project is to:

- Summarise the aim and specific objectives of the project;
- Summarise the main lessons learnt from such initiatives that are applicable to the implementation of future urban sanitation projects;
- Downscale the lessons learnt in the context of the ACCESSanitation project, considering how they contribute, inform and strengthen the implementation of the ACCESSanitation project;
- Ensure that project partners are aware of relevant previous initiatives in respect to urban sanitation in Africa, to avoid re-inventing the wheel and improve on the existing ACCESSanitation project design and framework for implementation.

The main lessons emerging from each of the projects were analysed in respect to the following categories, considered fundamental to project design and implementation namely; 1) Planning – sector reform and policies; 2) Strategies – financing strategies and

⁸JMP. 2010. Progress on Sanitation and Drinking-water: 2010 Update. WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation. Available at: http://www.unwater.org/downloads/JMP_report_2010.pdf (Accessed 29.03.2011).

partnerships and 3) Implementation – improved governance; communication; sustainable and innovative technologies.

The criteria for selecting African sanitation projects and programmes for inclusion within this document were as follows. The activities should:

- Be focused on urban and/or peri urban (including urban informal settlements) sanitation
- Be medium to long term initiatives, to ensure a similar duration as ACCESSanitation (24 months upwards – with one exception being a study, duration 15 months)
- Have sustainability embedded within the framework of the project
- Contain both hardware and software components
- Where possible feature active local government involvement as implementers or key stakeholders
- Provide detailed lessons learnt that are relevant to the ACCESSanitation project.

In collating the lessons learnt and main outputs of multifaceted urban sanitation projects in Africa, key themes in line with the ACCESSanitation methodology applied, or that can serve to enhance future actions within the project emerged, as they consider:

- Actions should address a wide range of sanitation actors
- Projects should seek to build knowledge networks and capacity; growing institutional knowledge and housing information in accessible institutions for access by key stakeholders
- Projects need to implement action on the ground by redirecting resources i.e. human, fiscal and time to the local level
- Project partners need to recognise the need for political buy-in and to embed the process within local governance to contribute to improved sustainability of the action post - implementation
- The projects highlight the need for increased sensitisation and capacity building at the local level to contribute to sustainable and successful interventions, enhancing future operation and maintenance

A valuable product of this report is that it serves to summarise/identify key entry points, opportunities and strategic partnerships that are relevant within the context of the ACCESSanitation project. This lends itself to contributing and informing the development of future water and sanitation projects and programmes, implemented by members of the project consortium. In addition, it enriches the transfer of knowledge and good practices between the participating regions within the project namely; South Asia, Southeast Asia and Sub-Saharan Africa, a key objective of the ACCESSanitation project.

3. Completed projects

This section of the report aims to discuss and highlight some of the completed studies, projects and programmes undertaken in Africa that are relevant to ACCESSanitation. Additional information related to projects and programmes listed in this section, such as key partners and relevant contact information are summarised in annex 1.

3.1 Resource Orientated Sanitation concepts for peri-urban areas in Africa (ROSA)

Dates	Inception: October 2006 Duration: 29 months
Target group and location	Target group: local municipalities, research/ consortium partners, research institutes and universities, key sanitation sector actors in the target locations, community and end users. Location: Eastern Africa
Main objectives	The overall aim of ROSA is to promote resource-oriented sanitation concepts as an effective tool of sustainable sanitation, contributing to the achievement of the Millennium Development Goals (MDGs) ⁹ . The project has the following specific objectives ¹⁰ : <ul style="list-style-type: none"> • Implement resource-orientated sanitation concepts in four model cities in East Africa namely Arbaminch, Ethiopia; Nakuru, Kenya; Arusha, Tanzania and Kitgum, Uganda. • Through research identify the gaps for the implementation of resource-orientated sanitation concepts in peri-urban areas • Develop a general, adaptable framework for the development of strategic sanitation and waste plans (SSWPs)

1. Main Lessons Learnt

The main lessons learnt and observed within the duration of the ROSA project were summarised from the 'ROSA project summary' published by the EcoSan Club¹¹ and an external project design and implementation review¹²:

1. Planning – sector reform and policies

1.1. The project recognised the need for frequent reviews of the Strategic Sanitation and Waste Plans (SSWPs) throughout the duration of the project and beyond. Within the project

⁹ ROSA. 2011. Resource-Oriented Sanitation concepts for peri-urban areas in Africa (ROSA) project website. Available at: <http://rosa.boku.ac.at/> (Accessed 03.02.2011)

¹⁰ ROSA. 2011. Resource-Oriented Sanitation concepts for peri-urban areas in Africa (ROSA) project website. Available at: <http://rosa.boku.ac.at/> (Accessed 03.02.2011)

¹¹ ROSA. 2011. Resource-Oriented Sanitation concepts for peri-urban areas in Africa (ROSA) project website. Available at: <http://rosa.boku.ac.at/> (Accessed 03.02.2011)

¹² Shewa, W.A., Ayano, K.K. & F. Meinzingger. 2010. From pilot units to large-scale implementation – the case of Arba Minch, Ethiopia. Sustainable Sanitation Practice, Issue 4.

the local action plans were considered working documents to be updated as information, challenges and needs emerged in response to challenges and needs at the local level¹³. However the planning tool developed within the project was considered too complicated for practical application, being time and data intensive. As such it is to be redeveloped in a subsequent project, CLARA¹⁴.

1.2. The concept of planning was not well established in the respective project focal locations, which impeded the process, requiring additional resources and capacity building than envisaged in the project proposal¹⁵.

1.3. A number of the project partners were located in Europe and noted that the traditional concept of planning in Europe was not transferable to the local context. The partners noted that planning processes can only be successful, when ownership is taken by the municipality, as they know the local processes and the key actors for sanitation within the local environment¹⁶.

2. Strategies – financing strategies and partnerships

2.1. To ensure sustainability, initiatives implemented at the local level, require the project consortium to operate in an integrated manner including all key local actors in the sector¹⁷.

2.2. Insufficient time was attributed to “family building” at project inception i.e. more time should have been designated for stakeholder and partner engagement, and strengthening the relationships between the key actors in the programme. The draw-back of large scale, short to medium term projects is that they often necessitate rapid action to ensure completion of implementation orientated deliverables within the project timeframe¹⁸.

2.3. Obstacles were encountered in respect to local bureaucracy within the participating cities where regulations, particularly in reference to procurement, impeded implementation of project activities¹⁹.

2.4. Having municipalities as full project partners serves to build and enhance the sustainability and local adoption of the project interventions²⁰.

2.5. Promoting partnerships between municipalities and local universities is a way to ensure the exchange of new technologies and research ideas. This in turn serves to ensure that new research themes give due consideration to local challenges, and serve as a base to facilitate

¹³EcoSan Club. 2010. Sustainable Sanitation Practice: The ROSA project. Issue 4. 7/2010.

¹⁴Based on telephonic interviews with the project coordinator

¹⁵Based on telephonic interviews with the project coordinator

¹⁶Based on telephonic interviews with the project coordinator

¹⁷EcoSan Club. 2010. Sustainable Sanitation Practice: The ROSA project. Issue 4. 7/2010.

¹⁸Shewa,W.A., Ayano, K.K. & F. Meinzinger. 2010. From pilot units to large-scale implementation – the case of Arba Minch, Ethiopia. Sustainable Sanitation Practice, Issue 4.

¹⁹Shewa,W.A., Ayano, K.K. & F. Meinzinger. 2010. From pilot units to large-scale implementation – the case of Arba Minch, Ethiopia. Sustainable Sanitation Practice, Issue 4.

²⁰EcoSan Club. 2010. Sustainable Sanitation Practice: The ROSA project. Issue 4. 7/2010.

more inclusive larger networks²¹. However, following the project conclusion only two of these partnerships have remained active²². With Arba Minch, in partnership with the local university continuing their collaboration via participation in the CLARA project, and Nakuru remaining in partnership with its local university.

3. Implementation – improved governance; communication; sustainable and innovative technologies

3.1. It was noted that implementation was generally smoother where target or pilot cities were in close proximity to the local partners²³.

3.2. Staff turnover in the pilot cities was recognised as a challenge at the onset of the project, and as such local staff contacts were amended to ensure that there was a sufficient hand over between departing and incoming staff ensuring continuation and avoiding loss of institutional knowledge²⁴.

3.3. Having local representatives working on a project, ensured that partners were aware of local level project challenges and demands. This served to build human capacity on the ground and ensure local demands were addressed. Overall local inclusivity mobilises political buy in and enhances long-term sustainability of the project²⁵.

3.4. There is a need for intensive awareness raising and education in relation to the reuse aspect of the technologies, with communities expressing concern in some pilots in relation to the use of compost produced from the sanitation facilities²⁶.

3.5. Activities undertaken within the framework of the project that remain operational, are largely due to local adoption of the systems. In Kenya, the establishment of school latrines, is remained functional beyond the scope of the project, as training in respect to maintenance, good practice and hygiene has been incorporated within the school curriculum. In addition there is still a former ROSA team member based in the municipality monitoring the process. In Arusha, there is still a number of individuals from the ROSA project, that are now being salaried from the municipal budget that have been successful in ensuring operation and maintenance of local systems, building the institutional memory and promoting resource orientated sanitation in the region at annual trade fairs²⁷.

²¹EcoSan Club. 2010. Sustainable Sanitation Practice: The ROSA project. Issue 4. 7/2010.

²²Based on telephonic interviews with the project coordinator

²³Shewa, W.A., Ayano, K.K. & F. Meinzinger. 2010. From pilot units to large-scale implementation – the case of Arba Minch, Ethiopia. Sustainable Sanitation Practice, Issue 4. Page 33.

²⁴Shewa, W.A., Ayano, K.K. & F. Meinzinger. 2010. From pilot units to large-scale implementation – the case of Arba Minch, Ethiopia. Sustainable Sanitation Practice, Issue 4. Page 33.

²⁵EcoSan Club. 2010. Sustainable Sanitation Practice: The ROSA project. Issue 4. 7/2010.

²⁶Kinobe, J., Olweny, S. & C. Niwagaba. 2010. Case study of SuSanA project. Household composting of organic waste and faeces. Sustainable Sanitation Alliance.

²⁷Based on telephonic interviews with project coordinator

2. Relevance for ACCESSanitation (partners, participating cities and urban sanitation in Africa, Philippines and India).

The ROSA project considered resource orientated sanitation applied at the local level. In highlighting the synergies to the ACCESSanitation project the case studies developed by the ROSA project, can serve to contribute to the knowledge exchange of good practice, integrated within the ACCESSanitation project. The ACCESSanitation partners can disseminate the case studies to the participating cities and wider network, to demonstrate previous sanitation interventions and key outputs. Further analysis indicated the following, as relevant to the ACCESSanitation project:

1. The project provided detailed case studies of a variety of reuse orientated sustainable sanitation technologies that serve as an excellent resource for municipalities, with detailed information available on the local context (institutional, governance, economic, financial and social aspects of each case), sanitation technologies (application, constructions, implementation and reuse) and operation and maintenance contributing to the sustainability of the systems.
2. Development of local action plans is key to addressing the sanitation challenge at the local level. However, it is imperative that such plans once developed are actively updated and maintained to ensure they stay relevant to the local sanitation situation.
3. Priority needs to be given early in the project, to the intensive development and cementing of the relationships within the project consortium, and between target communities and key stakeholders participating in the project. Due to restricted time-frames of many such interventions this is often not emphasised in project development. However, it is pivotal to the overall success and actions developed within the project.
4. Smooth implementation of the project objectives and actions was observed to correlate closely with the proximity of the local partners to the target or pilot cities.
5. Procurement regulations and local bureaucracy often impeded project activities and implementation. Formulating strong links with the project team at the local level and knowledge of the local institutional landscape is therefore essential for successful project implementation on the ground.
6. High staff turnover is considered to be a key challenge in large scale projects. Measures must therefore, be put in-place to ensure there is sufficient hand over between departing and incoming staff, e.g. contracts stipulating specific hand over periods could be implemented to address such concerns. This ensures minimal disruption to the project and the retention of institutional memory.
7. Recruiting municipalities as a member of the project consortium, rather than as a stakeholder or implementing agent, was pivotal in embedding the process in local processes

and securing buy-in at the local level. This allows the municipality the opportunity to contribute more effectively to the direction and challenges addressed within the project.

8. Social stigma was observed in relation to reuse but was adequately addressed through awareness raising and capacity building. For reuse technologies to be effective and sustainable they have to be accepted and adopted by the local communities.

9. ROSA developed a large team of local actors who were based in the municipalities as part of the project team. While such a large team is resource intensive in regard to financial and human resources (salaries and staff time), local focal teams were considered pivotal for accurate transfer of local needs and challenges and for facilitating local actions and timely feedback to the project consortium.

10. The project capitalised on the networks and relationships built within the ROSA project with the establishment of the ASKNet, the African Sanitation Knowledge Network, co-founded by the ROSA partners²⁸. This aimed to capitalise upon the relationships established within large scale projects through the formulation of a network to ensure that institutional knowledge collated during the project remains beyond the project and can inform future regional interventions, utilising local downscaled knowledge of the key challenges on the ground. Two ASKNet meetings took place during 2008/2009. However, following the conclusion of the project the momentum for the network and associated activities and discussions have faded.

11. ‘Sensitisation and awareness raising of the operation and maintenance needs of systems implemented is integral for sustainable implementation of sanitation systems’²⁹, and as such ACCESSanitation should develop well-defined strategies for both monitoring and evaluation and operation and maintenance within city sanitation plans.

12. It was envisaged that outputs and documentation from the ROSA project would contribute to the Sustainable Sanitation Alliance (SuSanA) via working groups, and by utilising the SuSanA website to further disseminate and link to outputs developed in the project. Such dissemination opportunities are highly relevant to urban sanitation projects³⁰.

3.2. Network for the Development of Sustainable Approaches for Large Scale Implementation of Sanitation in Africa (NETSSAF)

Dates	Inception: June 2006 Duration: 29 months
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²⁸Shewa, W.A., Ayano, K.K. & F. Meininger. 2010. From pilot units to large scale implementation – the case of Arba Minch, Ethiopia. Sustainable Sanitation Practice, Issue 4.

²⁹Shewa, W.A., Ayano, K.K. & F. Meininger. 2010. From pilot units to large scale implementation – the case of Arba Minch, Ethiopia. Sustainable Sanitation Practice, Issue 4. Page 33 reference to Mullegger&Freiberger, 2010

³⁰Shewa, W.A., Ayano, K.K. & F. Meininger. 2010. From pilot units to large scale implementation – the case of Arba Minch, Ethiopia. Sustainable Sanitation Practice, Issue 4. Page 33

Target group and location	<p>Target group: Research organisations including local universities, local governments (municipalities) and development agencies³¹</p> <p>Location: Actions and interventions within the project were focused on West Africa</p>
Main objective	<p>The overarching aim of the NETSSAF project was to propose feasible solutions to support large-scale implementation of sustainable sanitation systems in peri-urban and rural areas, contributing to the achievement of the Millennium Development Goals³². The specific objective was to create synergies through coordinating and integrating current scientific research, technological innovation and execution activities.</p>

1. Main lessons learnt

1. *Planning – sector reform and policies*

1.1. Institutional mapping and stakeholder identification is a pivotal step at the outset of the project and should be informed by a cohesive strategy as to how the project consortium intends to implement this. However, as projects evolve new stakeholders are continually identified and where appropriate should be engaged in the project to ensure collaboration with all key actors in the locality.

1.2. There is a need to reform training of professionals in the field of sustainable sanitation. In Africa universities are recognised as the prime medium to expand and establish new training activities to promote ecological sanitation and the benefits of resource orientated sanitation³³.

2 *Strategies – financing strategies and partnerships*

2.1. The stakeholder engagement strategy for NETSSAF was divided into two key components, a) involvement of stakeholders within the dissemination strategy and, b) obtaining feedback from key stakeholders in relation to the emerging results, in order to strengthen the end project outputs³⁴. This document serves as a useful tool that can be applied to projects undertaken at the local level, and can build the institutional capacity of local government staff.

³¹Fall, P.A., Barreto, L., Zubrugg & C. Werner. 2009. Water, Sanitation and hygiene: Sustainable Development and Multisectoral approached. NETSSAF – a multidisciplinary collaboration towards more sustainable sanitation in West Africa: main results. 34th WEDC International Conference, Addis Ababa, Ethiopia.

³²NETSSAF. 2008. Network for the development of sustainable approaches for large scale implementation of sanitation in Africa. Deliverable 70: Final NETSSAF Conference Report. Available at: <http://www.netssaf.net/>

³³NETSSAF. 2008. Network for the development of sustainable approaches for large scale implementation of sanitation in Africa. Deliverable 14: New specialised training activities within NETSSAF

³⁴NETSSAF. 2008. Network for the development of sustainable approaches for large scale implementation of sanitation in Africa. Deliverable 2: Criteria for identification of key actors: dissemination criteria. Available at: <http://www.netssaf.net>

3 Implementation – improved governance; communication; sustainable and innovative technologies³⁵

3.1. The formulation of the network was the key output of the NESSAF project, providing a communication platform to exchange knowledge and good practice. The initiative highlighted the need to engage a wide range of stakeholders and to identify key regional actors within the sanitation sector when undertaking interventions in a region. Many of the key actors in this project were instrumental in later formulating the SuSanA platform.

3.2. While no funding was available for implementation of pilot projects at the local level in NETSSAF, documentation noted the need for hands-on experience with sanitation technologies through pilot initiatives, field visits or demonstration sites. Actively contributing to training and capacity building activities served to encourage participation, ownership and adoption of sustainable sanitation systems

3.3. There is a strong demand for capacity building across all stakeholders at the local level. However, this should focus not only on the provision of skills but also include a central component of awareness raising to precipitate behaviour change in respect to improved sanitation practices at the local level.

3.4. Identification of local champions is essential for contributing to local adoption and sustainability of the project.

3.5. Training and capacity building frameworks and methodologies need to be adapted to the local context i.e. only developing web-based tools if the internet is readily accessible.

3.6. Sanitation technologies should not be presented in isolation - the challenges and advantages of each technology should be clearly outlined and considered not as individual units but as a component of the larger sanitation system.

3.7. To facilitate the observation above, criteria were developed within NETSSAF to provide decision makers with a comprehensive evaluation of sanitation systems. The aim is that the evaluation could assist in the planning process and ensure that local authorities are able to consider the health, environmental and resources, technology and operation, financing and social, cultural and gender implications of any systems they choose to implement³⁶.

2. Relevance for ACCESSanitation (partners, participating cities and urban sanitation in Africa, Philippines and India).

The lessons learnt from the NETSSAF project in relation to stakeholder engagement and application highlights the need to ensure strong partnerships, communication and engagement with all key stakeholders in the sector. Providing a number of transferable tools and methodologies, applicable within the context of the ACCESSanitation project.

1. Through the NETSSAF project the consortium developed a database of service providers from within the sanitation sector to contribute to 'at scale' development in Africa. The sanitation yellow pages were expected to contribute to the development of small and medium enterprises (SMEs), contributing to income generation and capacity building at the local level. While there is no evaluation of the degree to which this was achieved the database does serve as a resource for the identification of key stakeholders within the

³⁵NETSSAF. 2008. Network for the development of sustainable approaches for large scale implementation of sanitation in Africa. Deliverable 70: Final NETSSAF Conference Report. Available at: <http://www.netssaf.net>

³⁶NETSSAF. 2008. Network for the development of sustainable approaches for large scale implementation of sanitation in Africa. Deliverable 22 & 23: Evaluation of existing low cost conventional as well as innovative sanitation systems and technologies. Available at: <http://www.netssaf.net>

sector³⁷. Within the context of the ACCESSanitation project it would be beneficial to record the details of active stakeholders within the sanitation sector that are encountered during the project to provide a strong database of local organisations, service providers, non-governmental organisations (NGOs), community based organisations (CBOs) and individuals that could positively contribute to actions at a municipal level, serving as a resource to participating municipalities.

2. Detailed institutional mapping and stakeholder assessment is pivotal to the implementation of a successful project. In NETSSAF the project partners developed a detailed stakeholder identification form, cataloguing all pertinent information for identified actors within the sector. While this in-depth research undertaken can often not be replicated in smaller scale projects. It would be highly valuable to ensure that as key actors are identified during project implementation a database is established to record relevant information, growing the institutional memory of the municipal sanitation sector.

3. The sustainable sanitation planning manual and tutorial is a highly valuable tool in the developing country context. Aimed at decision makers, it encourages individuals to look beyond traditional approaches and consider low cost and appropriate sanitation systems that are locally applicable. The tool can be found at <http://netssaf.net> and is highly relevant following the formulation of the city sanitation plans in assisting decision makers to decide where future implementation will take place.

4. While recognition of the need to adopt sanitation improvement may be present at the municipal administration level, this does not necessitate that it will be observed within the general population. As such demand creation for sustainable sanitation, awareness raising campaigns and sensitisation are often integral to successful implementation and sustainability.

5. A participatory approach should be implemented when assessing the local sanitation conditions and user priorities³⁸.

6. Tools such as Participatory Analysis for Community Action (PACA) serve to identify community problems and suitable solutions in collaboration with the community thereby, improving integration within the project³⁹.

7. It is essential to analyse the financial capacity of the locality in which implementation of sanitation hardware and software is to be applied, in addition to the willingness to pay⁴⁰.

8. If implementing hardware approaches, it can be beneficial to produce an 'owners' manual' outlining correct operation and maintenance of the sanitation facility, to capacitate the owner in the long term⁴¹.

9. Key resources were identified and summarised within the NETSSAF project that could serve to provide a wealth of training materials in respect to sustainable sanitation, to educate and capacitate others working in the field of sustainable sanitation and

³⁷NETSSAF. 2008. Network for the development of sustainable approaches for large scale implementation of sanitation in Africa. Deliverable 70: Final NETSSAF Conference Report. Available at: <http://www.netssaf.net>

³⁸NETSSAF. 2008. Network for the development of sustainable approaches for large scale implementation of sanitation in Africa. Deliverable 46: NETSSAF Participatory planning approach: A guideline for sustainable sanitation planning. Available at: <http://www.netssaf.net>

³⁹NETSSAF. 2008. Network for the development of sustainable approaches for large scale implementation of sanitation in Africa. Deliverable 46: NETSSAF Participatory planning approach: A guideline for sustainable sanitation planning. Available at: <http://www.netssaf.net>

⁴⁰NETSSAF. 2008. Network for the development of sustainable approaches for large scale implementation of sanitation in Africa. Deliverable 46: NETSSAF Participatory planning approach: A guideline for sustainable sanitation planning. Available at: <http://www.netssaf.net>

⁴¹NETSSAF. 2008. Network for the development of sustainable approaches for large scale implementation of sanitation in Africa. Deliverable 46: NETSSAF Participatory planning approach: A guideline for sustainable sanitation planning. Available at: <http://www.netssaf.net>

municipalities. This includes, but is not limited to, material from GTZ, ULEEDS, IEES, TUT, SLU, EAWAG⁴².

10. Located on the project website the NETSSAF project produced a summary document evaluating existing low cost conventional and innovative sanitation systems and technologies. This comprehensive document aligns with the SuSanA criteria for sustainable sanitation, and would provide a detailed background to sanitation solutions for participating ACCESSanitation partners and municipalities in the development of their city sanitation plans, future activities and pilot initiatives⁴³.

3.3. Development Aid and Access to Water and Sanitation in Sub-Saharan Africa

Dates	Inception: December2008 Duration: 15 months
Target group and location	Target group: Developmentpractitioners, policy makers, and donors within the water and sanitation sector.The target audience of the four case studies is key stakeholders in the water and sanitation sector within the target countries. Location: The study analysed data for twenty two countries via a desk-top study . The analyses were then further validated by presentation of the WSS sector situation of four case study countries , namely Kenya, Madagascar, Burkina Faso and Uganda.
Main objectives	The principal objective of this paper was to compare SSA countries' performance in the water and sanitation sector and analyse how effectively they utilised development aid received within the Water and Sanitation Sector (WSS) ⁴⁴ . Specific objectives were to: <ul style="list-style-type: none"> • Identify the factors determining performance in the provision of safe water and improved sanitation facilities; • Identify the factors and features determining the success and sustainability of aid-funded projects in these sectors; • Draw lessons for the design and implementation of future water and sanitation interventions

1. Main lessons learnt

Lessons learnt from this study are summarised from the review document entitled 'Development Aid and Access to Water and Sanitation in Sub-Saharan Africa'⁴⁵.

⁴²NETSSAF. 2008. Network for the development of sustainable approaches for large scale implementation of sanitation in Africa.

Deliverable 14: New specialised training activities within NETSSAF. Available at: <http://www.netssaf.net>

⁴³NETSSAF. 2008. Network for the development of sustainable approaches for large scale implementation of sanitation in Africa. Deliverable 22 & 23: Evaluation of existing low cost conventional as well as innovative sanitation systems and tehcnologies. Available at: <http://www.netssaf.net>

⁴⁴Salami, A.; Stampini, M.; Kamara, A.; Sullivan, C.; Namara, R. (2011): Development Aid and Access to Water and Sanitation in Sub-Saharan Africa, AfDB

⁴⁵Salami, A.; Stampini, M.; Kamara, A.; Sullivan, C.; Namara, R. (2011): Development Aid and Access to Water and Sanitation in Sub-Saharan Africa, AfDB

1. Planning – sector reform and policies

1.1. There is a real need for increased integration between policymaking, planning, budgeting and monitoring and evaluation, and for harmonization in data collection strategies.

1.2. Well-designed water utility reform plans substantially increase access to services, financial sustainability, and the quality of services provided. The types of reform that have been demonstrated to be most successful include:

- Incentives for employees that directly tie bonuses to performance;
- Improved commercial systems, including metering and metered billing;
- Introduction of knowledge and information systems for monitoring and evaluation; and
- Services to poor consumers which are financially sustainable and tailored to local needs.

1.3. To ensure adequate representation of water and sanitation in central and local government budget allocation decisions, there is a need for some funds to be ring-fenced for the sector

1.4. Greater progress is needed on the implementation of IWRM policies so as to ensure that water is used to achieve social and economic development goals, while guaranteeing sustainable vital ecosystems for future generations to meet their water needs. Policies alone are not enough.

1.5. A survey of 36 water professionals identified the most important factors for increased access to safe drinking water and improved sanitation to be the availability of adequate financial and technical resources to carry out the necessary work (33%); followed by the existence of the political will to implement the changes (15%), and thirdly the necessity for capacity building and reform of existing institutions (14%). The picture was slightly different when only the first choice factor for each respondent is taken into account. In this case political will (39%) came out ahead of capacity building and reform (24%) with adequate financial resources (21%) being in third place.

1.6. In addition to establishing rigorous procurement rules, corruption is best tackled through a more systematic approach to strengthening the legal institutions of the recipient countries; increasing the share of soft-side investments; fostering effective institutional frameworks; and increasing capacity and ownership.

2. Strategies – financing strategies; partnerships

2.1. Effectiveness of development aid is increased by baseline assessments (prior to any spending) and implementation of good monitoring and evaluation systems.

2.2. Greater participation of the private sector is required, as the available resources from user tariffs, government and development aid has not proven to be a reliable source of financing.

2.3. The private sector can play an important role both in terms of capital mobilization and capacity support, as well as through the provision of competitive supply chains. Donors and recipient countries should leverage their contribution through well-designed public-private partnership schemes.

2.4. Creating competition among vendors and avoiding monopolistic scenarios (through effective regulation) serves to encourage private sector participation in the sector.

2.5. NGOs and Water Users Associations (WUA) play an important role in ensuring stakeholder participation, which in turn contributes to project ownership by the end users and to increased sustainability.

3. Implementation – improved governance; communication; sustainable and innovative technologies

3.1. Greater attention should be given to adequate public awareness and sensitization, including hygiene education for the correct use of latrines and cleaning of hands following defecation.

2. Relevance for ACCESSanitation (partners, participating cities and urban sanitation in Africa, Philippines and India).

The lessons emerging from this review make a strong case for the need to undertake rigorous baseline assessments, as the first step in any project. This was a key step in the ACCESSanitation project, utilising the outputs of the baseline assessment to formulate future funding strategies and operation and maintenance scheduling. Further lessons emerging from the study that can inform the ACCESSanitation project include:

1. Implementation of water and sanitation projects necessitates a rigorous baseline assessment as the foundation to inform the subsequent design of city sanitation plans and implementation of actions. Data collated during the above study clearly highlights that such assessments allow for targeted funding in the long term, strategically allocating financial resources to address key challenges at the local level.
2. There is a need for increased integration when undertaking water and sanitation interventions. The first step of which is to conduct an intensive stakeholder analysis of the local context, and where possible the task force teams working on the project within the municipality should be representative of the key departments responsible for sanitation at the local level. In ACCESSanitation local implementation teams are often appointed by the cities administration. Therefore partners should ensure that they are aware of all the key stakeholders at the city level active in the sanitation sector. This will enable the project partners to put into place mechanisms to ensure relevant project information is disseminated to key stakeholders at the local level, beyond the immediate planning tool.
3. Political will, capacity development and adequate financial resources were identified as the main obstacles in the implementation of this project. In ACCESSanitation political will has been courted through the signing of a formal MoU by the political representatives (Mayors) of participating municipalities to ensure their commitment to the project. Capacity building is also an integral aspect of the ACCESSanitation methodology; however, direct training is limited to a small focal group or city sanitation task forces within the municipality. This study indicates it would be beneficial to implement methodology such as ‘training of trainers’, to upscale capacity enhancement to the maximum number of individuals.
4. In addition to mapping relevant stakeholders within the municipality there is a clear need to take cognisance of other stakeholders, such as local non-governmental organisations (NGO’s), community based organisations and water user associations. Such agencies often have established relationships within the municipality and the community and can contribute to improved buy-in, involvement and participation of the end users, the community. This will ultimately strengthen the intervention and increase the long term sustainability of project actions. In the context of the ACCESSanitation project this would be

highly relevant and applicable to improving the sustainability of the city sanitation plans, the implementation of the pilot project and associated activities.

5. It is noted that interventions should place an emphasis on software approaches such as awareness raising and sensitization. This is a highly important component within the ACCESSanitation project, where there is a risk that local municipalities will be focused solely on hardware sanitation technologies. It must be ensured that software approaches are given equal importance within projects such as ACCESS that aim to improve sanitation at the local level.

6. In Sub Saharan Africa there is increasing recognition of the need for local authorities to engage with the private sector, particularly in respect to water and sanitation. The private sector is often well placed to provide both financial and technical capacity building. During the stakeholder identification phase of ACCESSanitation it would be beneficial to highlight any such actors in the municipality that could contribute positively to the sanitation challenges. Should suitable organisations be identified and approached their role and contribution should be integrated within the development of the city sanitation plan.

3.4. The National Bucket Sanitation Replacement Programme (South Africa)

Dates	Inception: February 2005 Duration: 60 months
Target group and location	Target group: Government (national, provincial, local), all relevant departments and end-users Location: South Africa, including seven provinces (80 municipalities and more than 350 projects)
Main objective	The main objective of the National Bucket Sanitation Replacement programme is to replace all the bucket toilets in informal settlements in South Africa that were established before 1994 ⁴⁶ .

1. Main lessons learnt

1. *Planning – sector reform and policies*

1.1. Strong political support from the highest level, including from the State President and Cabinet, is critical to the success of large national service delivery programmes, especially where these are politically and socially sensitive.

1.2. While one department must take the lead (at national, provincial and local level), inter-departmental coordination is essential to the process.

⁴⁶WIN-SA. 2008. The National Bucket Sanitation Replacement Programme Lessons Learnt. Department Water Affairs and Forestry, Republic of South Africa.

1.3. Coordination, commitment and cooperation between key role players in the sector are essential for effective processes and procedures.

1.4. A successful nationally driven sanitation programme depends on the general commitment of Water Services Authorities.

1.5. Major programmes at national level must be supported by an equally substantial communication/ awareness programmes informing the aims, objectives and proposed beneficiaries.

1.6. Delivery is enhanced when regional government offices reflect clarity and focus, talking with “one voice” in their communications with local government.

1.7. For such programmes to be successful government needs to establish a team of professionals within the relevant government department that is dedicated virtually exclusively to the implementation of the programme. The necessary technical support must be put in place from the outset.

1.8. The "buy-in" by national government departmental regional managers and officials representing provincial and local government is essential to programmes that aim to fast-track delivery.

2. Strategies – financing strategies; partnerships

2.1. A strategy to inform, shape and support a programme is critical to its success – significant funding and adequate technical and human resources do not in themselves guarantee the success of a programme.

2.2. Municipalities must be encouraged to ring-fence and prioritise infrastructure grant funding in order to meet targets.

3. Implementation – improved governance; communication; sustainable and innovative technologies

3.1. Reporting and communication play an important role in ensuring that a programme is well understood by all stakeholders.

3.2. It is necessary to ensure regular feedback to stakeholders on aims, progress, challenges and interventions.

3.3. Expectations must be managed by ensuring that beneficiaries fully understand the impact and consequences of their preferred choices.

3.4. New alternative on-site sanitation systems are encouraged by the inclusion beforehand of water and sanitation information and education, and should be monitored and supported once implemented.

3.5. Hygiene awareness must be an important component of on-going delivery programmes. The provision of toilets alone is insufficient to achieve sustainable sanitation and improvement in public health unless accompanied by improved hygienic awareness and behaviour.

2. Relevance for ACCESSanitation (partners, participating cities and urban sanitation in Africa, Philippines and India).

This project highlights factors to be considered for ‘at scale’ roll out of sanitation initiatives, and that should be continually revisited throughout project implementation to ensure that they remain a priority for the project partners.

1. While integration and coordination between departments at all levels of government including local is imperative, the overall responsibility for implementation must reside in one department. The institutional repercussions where this is not the standard often result in fragmented action and a lack of service delivery on the ground. The same is true in the ACCESSanitation project where a designated sanitation task team is assigned to liaise with project partners in respect to the ACCESSanitation project. If this team is interdepartmental it fosters collaboration between line functions however it is imperative that the overall responsibility for participation and all deliverables resides with one department within the municipality.
2. Replacement of the bucket system often leads to a demand for improved (often water borne) sanitation facilities. It is important when replacing or improving existing sanitation systems that the relevant maintenance and operation costs are fully considered by a municipality and the individual and or community to ensure that it is economically viable in the longer term.
3. This programme clearly shows the need to align to national programmes within the respective regions. One of the main successes of the national bucket replacement programme is that it allowed for implementation at scale of the programme, with national government steering the programme and local government implementing the upgrading through a series of nationally and locally funded projects.

3.5. USAID Hygiene Improvement Project (HIP)

Dates	Inception: 2004 Duration: 72 months
Target group and location	Target group: Government (national and local), development practitioners, policy makers, technical specialists and donors agencies. Location: Case studies undertaken in Ethiopia and Madagascar
Main objective	Aim: The six year HIP programme sought an innovative approach to tackling one of the world’s most intractable illnesses—diarrhoea - focussing on hygiene behaviour patterns rather than the conventional provision of services: hand washing with soap, safe faeces disposal, and household safe storage and treatment of drinking water. The objective was to pioneer an “ at scale ” approach in Ethiopia (one target area) and Madagascar (four target areas). This involved developing approaches for implementing hygiene and sanitation improvement, adopting a whole systems approach , rather than targeting different aspects of the problem in isolation - engaging multiple sectors, actions, options, and stakeholders in defining the problem and agreeing on the solutions ⁴⁷ .

⁴⁷ USAID. 2011. USAID Hygiene Improvement Project: September 30, 2004 – November 30, 2010. End of Project Report.

1. Main lessons learnt

Delivering “at scale” – a whole systems approach: Lessons Learned from Ethiopia and Madagascar collated from the HIP project close out report⁴⁸.

1. Planning – sector reform and policies

- 1.1. Investing in at-scale programming takes time, but starting at scale works.
- 1.2. Changing old established hygiene behaviour patterns and practices also requires intensive activity at the household and community level.
- 1.3. “It is imperative that at-scale hygiene and sanitation initiatives should be integrated with existing institutional frameworks in order that sustainability is “built-in” from the outset”⁴⁹.

2. Strategies – financing strategies; partnerships

- 2.1. “Partner and leadership buy-in is critical for creating an enabling environment. The nature of at-scale programs requires engagement from many levels simultaneously. Government is critical because it provides the vehicle that can reach all citizens and influence the actions of society”⁵⁰.
- 2.2. No single sector of society (public, private, civil) or individual development program/platform is likely to effect large-scale change in creating demand for sanitation at the local level, as to what is considered an ideal behaviour and delivering noticeable health benefits involves. All “stakeholders need to be involved, all channels need to be applied, and all sectors (health, water, education) need to be engaged to implement hygiene improvement at scale”⁵¹.
- 2.3. Promote public-private sector collaboration and partnerships that aim to increase accessibility and affordability of key products and services intended to improve hygiene and sanitation behaviours.
- 2.4. Community-led initiatives to effect change in behaviour are complemented and further enhanced by, a) the creation of a market for sanitation products and services, and b) building capacity and financing options so these markets can develop and flourish.

3. Implementation – improved governance; communication; sustainable and innovative technologies

- 3.1. Systematic capacity building of many actors at all levels is key to success. Capacity building must go beyond one-off training workshops, and be supported by well-designed training activities; focused mentoring over time that moves to internal mentoring and technical assistance; supportive supervision; frequent use of performance indicators; and other elements that build and maintain performance over time. Building capacity also means agreement on key competencies for a range of actors.

⁴⁸USAID. 2011. USAID Hygiene Improvement Project: September 30, 2004 – November 30, 2010. End of Project Report.

⁴⁹USAID. 2011. USAID Hygiene Improvement Project: September 30, 2004 – November 30, 2010. End of Project Report. Page 7.

⁵⁰USAID. 2011. USAID Hygiene Improvement Project: September 30, 2004 – November 30, 2010. End of Project Report. Page 7.

⁵¹USAID. 2011. USAID Hygiene Improvement Project: September 30, 2004 – November 30, 2010. End of Project Report. Page 7.

2. Relevance for ACCESSanitation (partners, participating cities and urban sanitation in Africa, Philippines and India).

This project highlighted the need for coordinated integration of all key actors with the sector to enhance the sustainability of interventions. Further, it provided a number of tools that could inform actions at the local level and future sanitation initiatives within the city.

1. The HIP project indicates that integrated action of key stakeholders within the sector is more likely to effect change at the local level. Throughout the process detailed stakeholder analysis needs to be conducted and all key actors engaged within the process. Through ACCESSanitation a review of key local stakeholders was undertaken, and a complement of key actors participated from the outset within the project. At a municipal level care must be taken to ensure integration of all key departments and actors, to improve the longevity and ownership of both the city sanitation plans and the resulting pilot initiatives. There is a risk in the ACCESSanitation project that the dedicated city sanitation task force teams will be restricted to one department and as such not fully integrate into the governance and institutional landscape.

2. Capacity development, awareness raising and behaviour change interventions require time intensive activity at the community level if they are to be successful. Project planning must ensure that sufficient time is allocated for engagement and sensitisation of the community.

3. Partnerships and collaboration with the private sector should be considered, as these can contribute to increased financial and technical capacity at the local level. Such strategies are of particular benefit in informal settlements where service provision is not yet mandated or municipal capacity is overburdened.

4. Public private partnerships should also be considered in development/ creation of a market for sanitation services and products and may have wide reaching advantages such as income generation, increased service provision, development of SME. Where applicable such services and actors should be considered in the development of the city sanitation plans.

5. The need for intensive and on-going training and capacity building is recognised within the frameworks of ACCESSanitation. It would be beneficial to review the capacity and competencies of the stakeholders to be involved in the training process. Such a diagnostic would allow for a targeted training approach at the correct intensity within the project, tailored to address local challenges. In addition to the individual stakeholders capacity it is also advantageous to ensure that training methods envisaged are locally appropriate e.g. access or availability of internet can be restricted.

Training manuals and materials were developed within the programme to upscale replication of this approach in new regions. Guides that would be valuable to the partners within the ACCESSanitation project include:

- “Woreda Resource Book for Community-Led Total Behaviour Change in Hygiene and Sanitation”, provides a step-wise process for communities which can be customised to contribute to behaviour change causing the community to shift from unsafe basic hygiene and sanitation practices⁵².
- “Facilitator’s Guide for Training in Community-Led Total Behaviour Change in Hygiene and Sanitation”, is a tool aimed to build the capacity of health extension workers to support behaviour change at the community level⁵³. Such a tool will be relevant in participating ACCESSanitation cities where there are a number of community health workers contributing to the development of the city sanitation plans and activities as part of the assigned ACCESSanitation task force.
- “Health Extension Worker Handbook”, is a resource manual aimed at community health workers, providing worksheets, tools and resources for conducting awareness raising and behaviour change activities at the household level⁵⁴.

3.6. Research-inspired Policy and Practice Learning in Ethiopia and the Nile Region (RiPPLE)

Dates	Inception: July 2006 Duration: 60 months
Target group and location	Target group: Practitioners and technical specialists designing water supply and sanitation systems; researchers. Location: Ethiopia, Sudan and Kenya
Main objective	This study looks at factors that surround technological ⁵⁵ choice. The main project report described the 5 main objectives as followed ⁵⁶ : <ul style="list-style-type: none"> • To identify, document and compare factors affecting choice of water supply and sanitation (WSS) technologies in Ethiopia and Kenya through collaborative research; • To understand the links between the process of technology choice and its wider context related to, for

⁵²USAID. 2008. Woreda Resource Book: Community-Lead Total Behaviour Change in Hygiene and Sanitation. Accessible at: <http://www.hip.watsan.net/page/2876>.

⁵³USAID. 2009. Training in Community-led Total Behaviour Change in Hygiene and Sanitation: Facilitators Guide. Accessible at: <http://www.hip.watsan.net/page/3213>.

⁵⁴USAID. 2009. Health Extension Worker Handbook: Community-led Total Behaviour Change in Hygiene and Sanitation. Accessible at <http://www.hip.watsan.net/page/3214>

⁵⁵A wider definition of technology was used that includes physical infrastructure, machinery and equipment, knowledge and skills and the capacity to organise operate and maintain all of these.

⁵⁶ Ali, M., Sprung, E. & J. Faal. 2008. Technology choices in water supply and sanitation: Report on collaborative research, learning and networking between Ethiopia, Sudan and Kenya. RiPPLE & Practical Action Consulting.

	<p>example, income and employment of poor people, local economic growth and management at local level;</p> <ul style="list-style-type: none"> • To identify and establish potential for research and communication among practitioners; • To develop capacity and establish channels of communication for strengthening the Nile region RiPPLE network; and • To propose further actions in collaborative research, networking and communication in the region.
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1. Main lessons learnt

The main lessons learnt from this initiative were summarised from the main report emerging from the programme⁵⁷.

1. Planning – sector reform and policies

1.1. Policy pertaining to technology choice should aim to be as flexible as possible, due to the complexity surrounding technical and social processes⁵⁸.

1.2. Attention should be paid throughout the project cycle to the sustainability of projects. Sustainability of WSS are greatly strengthened when planning processes take into consideration a comprehensive spectrum of issues, in addition to technical issues, that includes participatory planning, financing, land rights, risk and vulnerability, growth and productivity.

1.3. Planning for the management “of technologies and the natural resources around them is often the largest determining factor in the longevity and benefits of a service”⁵⁹. Natural resource management is a critical element of planning process especially for ensuring water levels are maintained or increasing the amount of water available.

1.4. Technology choices alone (informed by technical, environmental, policy, financial and other variables) do not guarantee sustainability. They are only part of the solution and must work well in the wider physical, social and economic context. This highlights the value of adopting a multidisciplinary perspective to the understanding of social, economic and technical aspects of WSS.

⁵⁷ Ali, M., Sprung, E. & J. Faal. 2008. Technology choices in water supply and sanitation: Report on collaborative research, learning and networking between Ethiopia, Sudan and Kenya. RiPPLE& Practical Action Consulting.

⁵⁸ Ali, M., Sprung, E. & J. Faal. 2008. Technology choices in water supply and sanitation: Report on collaborative research, learning and networking between Ethiopia, Sudan and Kenya. RiPPLE& Practical Action Consulting. Page 30.

⁵⁹ Ali, M., Sprung, E. & J. Faal. 2008. Technology choices in water supply and sanitation: Report on collaborative research, learning and networking between Ethiopia, Sudan and Kenya. RiPPLE& Practical Action Consulting. Page iv.

2. Strategies – financing strategies; partnerships

2.1. Management solutions need to be context-specific. For example, in Ethiopia where land is scarce, land rights issues are prominent and must be addressed in order to prevent or resolve local conflicts.

3. Implementation – improved governance; communication; sustainable and innovative technologies

3.1. Technology choices are best made within the context of participatory appraisal and planning. This allows for consideration of the many inter-linking factors, such as cost and ability of users to understand, own, operate and maintain various technologies, regulations, as well as social and cultural norms.

3.2. Choice of technology should also take into consideration issues such as how a community expands its economic opportunities with the use of a technology

3.3. Operational sustainability depends on the ability of the community or local government to mobilise resources in case a large repair is needed. “Community-based management is popular but with more complex technologies, it is more difficult for communities to perform maintenance and manage breakdowns”⁶⁰.

2. Relevance for ACCESSanitation (partners, participating cities and urban sanitation in Africa, Philippines and India).

The choice of sanitation technology is integral to the sustainability of the system as it must be appropriate to the local context. Key aspects to consider include:

1. Technology choice needs to be carefully considered in the framework of the ACCESSanitation project. In the project there is scope for the implementation of small-scale pilot initiatives. In urban settlements and peri-urban areas it is imperative that the choice of hardware takes into consideration the social and economic contexts, long term viability and sustainability. This should incorporate due consideration not only of the capital costs but the long term operation and maintenance of the system.

2. In informal settlements particularly the issue of land rights needs to be considered and indeed has been raised in the Philippine cities with which ACCESSanitation is working. For example the construction of permanent or semi-permanent structures on land where the community has not secured land tenure can have detrimental consequences at the local level, and impede the ability to construct sanitation facilities.

⁶⁰Ali, M., Sprung, E. & J. Faal. 2008. Technology choices in water supply and sanitation: Report on collaborative research, learning and networking between Ethiopia, Sudan and Kenya. RIPPLE & Practical Action Consulting. Page iv.

3. Long term planning within the context of the city sanitation plans is vital for urban settlements that are continuously expanding. Effort needs to be made to identify growth points, to ensure that current and envisaged services are not developing in conflict with planned growth areas. Allowing municipalities to proactively plan for service delivery into the future.

4. Current projects

The following studies, projects and programmes were at the time of writing this document actively being implemented.

4.1. Lake Victoria Water and Sanitation Initiatives Project (LVWATSAN)

Dates	Inception: 2004 Duration: Envisaged conclusion 2017
Target group and location	Target group: Government (national and local), key local stakeholders in the water and sanitation sector including research institutes, NGOs, CBOs and communities (end-users) Location ⁶¹ : The Lake Victoria Region- 30 secondary towns in 5 countries namely, Kenya, Uganda, Tanzania, Burundi and Rwanda.
Main objectives	The aim of this project is to support secondary urban centers in the Lake Victoria Region to, i) address environmental degradation and enable them to contribute to the achievement of the water and sanitation MDGs; and ii) to contribute to an equitable and sustainable development – economic, social and environmental – for the benefit of the people living in the area ⁶² . The specific objectives are to put in place interventions for 30 secondary urban centers in the Lake Victoria Region to ⁶³ : <ul style="list-style-type: none"> Promote and expedite pro-poor water and sanitation investments in the secondary urban centres in the Lake Victoria Region

⁶¹Lake Victoria Basin Commission website. 2011. Accessible

at:http://www.lvbcom.org/index.php?option=com_content&view=article&id=72&Itemid=82

⁶²UN-HABITAT. 2010. The Lake Victoria Water and Sanitation Initiatives Project. Accessible at:

<http://www.unhabitat.org/content.asp?cid=2289&catid=462&typeid=24&subMenuId=0>

⁶³ UN-HABITAT. 2010. The Lake Victoria Water and Sanitation Initiatives Project. Accessible at:

<http://www.unhabitat.org/content.asp?cid=2289&catid=462&typeid=24&subMenuId=0>

	<ul style="list-style-type: none"> • Support development of institutional and human resource capacities at local and regional levels for the sustainable delivery of improved water and sanitation services • Facilitate realization of upstream water sector reforms at the local level in the participating urban centres • Reduce the environmental impact of urbanization in the Lake Victoria Basin Enhance capacities of local private sector entities in service delivery • Support economic development in secondary towns through improved water and sanitation, and related income generating activities • Support cooperation between the countries of the East African Region
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1. Main lessons learnt

The main lessons learnt to date from the Lake Victoria Water and Sanitation Initiative are highly relevant to the ACCESSanitation project and were summarised from key project documentation⁶⁴:

1. Planning – sector reform and policies

1.1. “An integrated approach to water and sanitation development is critical. In order to achieve an effective impact in expanding access to water and sanitation services and reducing poverty and environmental degradation, the design of water and sanitation programmes for small towns should reflect a reasonable balance and allocation of resources between the eight key components”⁶⁵:

- physical infrastructure
- solid waste management
- basic sanitation and hygiene promotion
- WATSAN services to vulnerable groups,
- school water supply and sanitation,
- training and capacity building for service providers, institutions and CBOs,
- skills training for women and youth, and
- promoting gender parity⁶⁶.

1.2. The performance of water utilities in small towns is improved by an approach that integrates infrastructure improvements with training and capacity building and the adoption of a long term strategic planning approach based on the Performance Improvement Plan as a tool for performance management.

1.3. A substantial capacity building programme targeting local authority officials should be incorporated into water and sanitation infrastructure works in small towns, and should begin before the works to improve physical infrastructure commences. It should be used as a platform to engage local stakeholders in the design of the physical interventions, thereby ensuring local ownership.

⁶⁴Lake Victoria Basin Commission website. 2011. Accessible at:
http://lvbcom.org/index.php?option=com_content&view=article&id=72&Itemid=82

⁶⁵Lake Victoria Basin Commission website. 2011. Accessible at:
http://lvbcom.org/index.php?option=com_content&view=article&id=72&Itemid=82

⁶⁶Lake Victoria Basin Commission website. 2011. Accessible at:
http://lvbcom.org/index.php?option=com_content&view=article&id=72&Itemid=82

2. Strategies – financing strategies; partnerships

2.1. Strategic Urban Plans should be provided to guide the design of WATSAN infrastructure. An appropriate spatial framework is necessary to guide the design of the physical interventions being implemented.

2.2. A “revolving fund approach is feasible as a means of expanding access to basic sanitation for poor and female-headed households. The approach has enormous benefits in mobilizing community savings for investment in sanitation. However, the management and oversight arrangements must be carefully designed and the schemes must include a strong sanitation social marketing component⁶⁷”.

2.3. Preparation of urban plans is an integral part of the capacity building component of an integrated WATSAN programme. These should be developed through a participatory and consensus building processes with the key stakeholders. These plans should be coupled with priority Action Plans and Investment Plans, thereby linking them with budgeting processes of the respective local authorities and the relevant central government ministries.

2.4. A regional approach to training and capacity building is immensely useful for the sharing of experiences and information exchange – for example, case studies, best practices and information on what works and what does not, can be drawn from across the region.

2.5. Training and capacity building in urban planning helps to ensure that urban plans are quickly prepared to guide the future development of the towns and to facilitate the design of the infrastructure works.

3. Implementation – improved governance; communication; sustainable and innovative technologies

3.1. For projects operating at a regional level, an effective implementation model must be in place to ensure national coordination, project management and community participation. It must be one that is adapted to fast track immediate interventions and achieve quick results in extending WATSAN coverage. An effective structure has the following components⁶⁸:

- A Programme Steering committee at the regional level to provide policy guidance for the initiative. Ministers responsible for water in the partner countries, the Secretariat for the regional community, and a partner organisation representative would comprise the committee.

⁶⁷Lake Victoria Basin Commission website. 2011. Accessible at:
http://lvbcom.org/index.php?option=com_content&view=article&id=72&Itemid=82. Page 26

⁶⁸Lake Victoria Basin Commission website. 2011. Accessible at:
http://lvbcom.org/index.php?option=com_content&view=article&id=72&Itemid=82

- **Project Management Units:** In each country, three levels of programme management under a framework for the management, implementation and co-ordination of the project
- **Project Implementation Units:** at the town level, project implementation coordinated by Project Implementation Units (PIUs), chaired by the respective Town Clerks. The primary role of the PIUs is to oversee and monitor the day to day management of project activities by the Implementing Partners and to review and approve requests for payment.
- **Multi-stakeholder Forums:** To encourage ownership at local level, Multi-stakeholder Forums (MSFs) bringing together representatives of municipal authorities, service providers, local businesses, NGOs, and CBOs have been formed in the project towns. The MSFs facilitate the active participation of a broad range of stakeholders at town level, in the design and implementation of the programme interventions. They also help to raise local awareness, develop understanding, ensure buy-in and build local support for the programme by promoting active stakeholder participation and can contribute to an enhancement of pro-poor governance structures in small towns.

3.2 It is important to establish institutional structures as early as possible in the programme implementation cycle and to anchor them in existing government institutions.

3.3 Raise awareness and mobilize programme support through participatory communication strategies such as through a dedicated website, the publication of programme materials, manuals, tool kits and fact sheets and participation in international and regional water and sanitation conferences, workshops, and exhibitions at the global and regional levels.

3.4 Develop a comprehensive framework to monitor water and sanitation coverage. This process will help in tracking progress towards meeting the water and sanitation targets set out in the MDGs and ensure that investments target the poorest communities. A specialized monitoring tool can also make a major contribution to improving the socio-economic knowledge base in the towns with considerable potential to improve strategic planning, capital budgeting and service delivery to the poor. A monitoring and evaluation (M&E) Framework should incorporate a baseline household survey (the Urban Inequities Survey), development of a Geographic Information System (GIS) for each urban centre, application of Remote Sensing Technology in community profiling (through the acquisition of High Resolution Satellite data), and building the capacity of local authorities to maintain and update the information.

2. Relevance for ACCESSanitation (partners, participating cities and urban sanitation in Africa, Philippines and India).

While the Lake Victoria Water and Sanitation Initiative (LVWATSAN) project is on-going and many aspects are complementary to the ACCESSanitation project. In a similar manner to ACCESSanitation, LVWATSAN project targets fast-growing urban settlements with a pro-

poor focus, aiming to support development of institutional and human resource capacities at local and regional levels for the sustainable delivery of improved water and sanitation services⁶⁹. Key lessons learnt from the project to date as applicable to the ACCESSanitation project include:

1. Project design, city sanitation planning and allocation of funding should incorporate the following thematic areas and ensure that collaboration and buy in is obtained from the relevant local government departments, actors and line functions;
 - physical infrastructure
 - solid waste management
 - basic sanitation and hygiene promotion
 - WATSAN services to vulnerable groups,
 - school water supply and sanitation,
 - training and capacity building for service providers, institutions and CBOs,
 - skills training for women and youth, and promoting gender parity.
2. Where private sector operators are present within municipalities care must be taken to include them within the development of any and all city sanitation plans. Specifically they could be incorporated through the inclusion of a performance management component within the larger city sanitation plan, to ensure regular monitoring and evaluation and standardisation and achievement of targets within the sanitation sector.
3. Physical interventions or development pilot interventions, as in the case of ACCESSanitation, should be conceptualised, designed and implemented in close collaboration with the relevant political and technical personnel within the municipality to ensure buy-in, promotion of sustainability and to contribute to building capacity at the local level.
4. Dedicated project management based at the municipal level is integral to ensure local buy-in, and that outputs and processes are embedded within the local governance frameworks, contributing to long term sustainability and facilitating timely action on the ground.
5. Comprehensive monitoring and evaluation frameworks and strategies need to be developed and should include a post implementation and project strategy that is embedded within local processes to ensure that follow up at the local level is maintained beyond the scope of the original project period.

4.2. Capacity-Linked Water and Sanitation for Africa’s Peri-Urban and Rural Areas (CLARA)

Dates	Inception: March 2011 Duration: 36 months
Target group and location	Target group: Local consultants, planners, municipalities, pilot communities and end-users therein. Location: Implementation and field research in Arba Minch, Ethiopia, with testing and evaluation of the simplified planning

⁶⁹Lake Victoria Basin Commission website. 2011. Accessible at:
http://lvbcom.org/index.php?option=com_content&view=article&id=72&Itemid=82

	tool to be undertaken in South Africa, Kenya, Ethiopia, Burkina Faso, Tunisia and Morocco.
Main objectives	<p>The main aim of the CLARA initiative is to strengthen local capacities to deal with integrated water supply and sanitation for small communities in rural and peri-urban areas. Through this project it is envisaged that the actions will actively contribute to the achievement of the water and sanitation Millennium Development Goals in Africa⁷⁰.</p> <p>The specific objectives of the CLARA project are as follows⁷¹:</p> <ul style="list-style-type: none"> • To assess and adapt existing low cost technologies to promote integrated decentralised water supply and sanitation systems applicable to the African context; • Improve water supply and sanitation systems ability to provide demand responsive water quality and sanitation products for reuse; • The development of a simplified planning tool, to assist local planners to compare the cost implications of implementing differing resource-orientated sustainable water supply and sanitation systems; • Field test and evaluate the simplified planning tool in a predefined area within five countries in Africa to ensure that different economic, cultural and social boundaries are accounted for

1. Main lessons learnt

To date due to the current stage of the project there are no formal lessons learnt at present.

1. Planning – sector reform and policies

1.1. The development of a simplified planning tool in the CLARA project, emerged from the lessons learnt in the implementation of the ROSA project. Wherein partners recognised that the planning was not an institutionalised concept in the project localities and that to undertake a planning process was resource intensive. As such the project aims to develop a tool wherein planner at the local level, could utilise it to objectively ascertain the most appropriate solutions (technology) to apply, when presented with a range of possible technologies.

2. Strategies – financing strategies and partnerships

2.1. Testing the simplified planning tool in project countries using a participatory approach. This aims to enhance the flexibility of the tool so that it is more robust and thus applicable in a broad range of social, cultural and economic contexts and at varying scales.

⁷⁰CLARA project website. 2011. Accessible at:

http://clara.boku.ac.at/index.php?option=com_content&view=article&id=48&Itemid=29

⁷¹CLARA project leaflet. 2011. Accessible at:

http://clara.boku.ac.at/index.php?option=com_phocadownload&view=category&id=1&Itemid=54

3. Implementation – improved governance; communication; sustainable and innovative technologies.

3.1. Field Research will consider problems identified within the implementation of the ROSA project in Arba Minch: 1) Investigate operation and maintenance, for treatment of urine and faecal matter, and the associated storage solutions to improve the compost quality; and 2) To develop business plans with local actors, through the identification and participation of local entrepreneurs

2. Relevance for ACCESSanitation (partners, participating cities and urban sanitation in Africa, Philippines and India).

The lessons learnt available for this project to date are limited as it is relatively early in its development. However given the target audience of the project is predominately municipalities and planners such an initiative would be well placed to contribute to the development of the ACCESSanitation project especially considering the majority of the target areas within ACCESSanitation are peri-urban areas or informal settlements. Given that the emerging lessons learnt from this project are likely to emerge beyond the scope of the ACCESSanitation project it would be beneficial to consider including representatives to the CLARA project in the final ACCESSanitation project conference.

This would enable lessons learnt from the implementation of ACCESSanitation to be absorbed into the CLARA initiative contributing to the institutional knowledge of the project and to contribute to inform implementation where applicable for the remaining duration of the project.

From discussions with the project co-ordinator it was noted that operation and maintenance and thus sustainability is often not ensured beyond the scope of the project. Locating urban and peri-urban sanitation interventions in close proximity to previous projects can serve to allow follow up on previous projects when site visits are undertaken for current projects. Furthermore when working with municipalities it is valuable to situate new projects locations where previous work has been undertaken, if there is a recognised need for subsequent interventions.

4.3 Water, Sanitation and Hygiene Technologies Research Project (WASHTech)

Dates	Inception: January 2011 Duration: 36 months
Target group and location	Target group: Key actors within the sanitation sector including governments, donor agencies, existing and future project consortiums, research institutes, universities, and end users' in the target countries Location: Burkina Faso, Uganda and Ghana
Main objective	The main objective of the WASHTech programme is to 'provide

	<p>the sector with a systematic and participatory way of assessing and adopting technology innovation that effectively takes the poorest of the world a step closer to expanding their life choices and opportunities for development'⁷².</p>
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1. Main lessons learnt

No data available at present due to early stage in project implementation.

2. Relevance for ACCESSanitation (partners, participating cities and urban sanitation in Africa, Philippines and India).

The lessons learnt available for this project to date are limited as it is relatively early in its development. However, given the target audience of the project is the sanitation sector and key actors therein lessons may emerge during the project that would be relevant for the remaining timeframe of the ACCESSanitation project.

As one of the main objectives of the project is to develop a systematic and participatory methodology of assessing and adopting technology, in developing regions, dependent upon the availability of outputs and lessons learnt, it may become applicable to the development or operation and maintenance strategies of the small scale pilot interventions and city sanitation plans developed within the framework of the ACCESSanitation project. As such partners should ensure that outcomes of this project are tracked for relevance and applicability to the ACCESSanitation project.

⁷²WASHTech website. 2011. Accessible at: <http://washtechafrika.wordpress.com/>

5. Lessons learned discussion

The seven projects highlighted in this document took place in various locations, and regions in Africa, each with its specific socio-economic conditions, cultural identity, varying levels of institutional capacity, and environmental context. Nevertheless, several cross-cutting lessons have been observed from the reviewed projects. It is envisaged the lessons learnt will contribute to and inform the project partners in the implementation of the ACCESSanitation project.

The various studies, projects and programmes that have been presented in the previous two sections have a number of similar lessons learned that have been emerging. These lessons can be taken forward as departure points for future planning and implementation of sustainable water and sanitation delivery on the African continent. In addition, other developing countries, particularly within the global south who experience similar challenges will also benefit from these experiences. The various lessons identified from the above are summarised and discussed below under the following themes: i) Planning – sector reform and policies; ii) Strategies – financing strategies and partnerships and iii) Implementation – improved governance; communication; sustainable and innovative technologies.

The authors acknowledge that there are a number of lessons learnt noted that are widely known within the development community e.g. the need to ensure political buy-in to enhance sustainability of activities and technologies at the local level. Where possible the authors sought to identify the way in which, for example, political buy-in was obtained or key challenges overcome that would be relevant and or transferable to the ACCESSanitation project. We acknowledge that it was not always possible to obtain specifics in regard to the key lessons collated within the document due to a number of limitations, such as the unavailability of detail within the open source project related literature, or key personnel who could be no longer contacted as they had left the organisation following the end of the project. Nevertheless the key lessons learnt gleaned from this study are valuable as they outline key hurdles that may be met within the development of the ACCESSanitation project.

1. Planning – sector reform and policies

There is need for sectoral reform within the water, sanitation and hygiene sectors to improve coordination and governance between the relevant actors. However, such a large scale sector reform, at the national level is time consuming and must be tailored to a country's requirements and as such is often outside the scope of many development projects. Within the context of medium term urban sanitation projects it is, however, possible to improve integration between key participating actors, and is often considered instrumental in successful local project implementation and thus can contribute to improved governance within the sector. However, while there is a need to ensure representivity and inclusivity of each of the relevant departments within at the local level, with the sole mandate for actions related to the project the responsibility of one line-function in a department. This will increase the likelihood of timely feedback and action at the local level, and ensure that the process is embedded within local governance and processes.

Emerging lessons of relevance to the implementation of the ACCESSanitation project:

- From project inception, increased attention needs to be paid to ensuring the project consortium is operating in an integrated manner and undertaking actions as a cohesive unit. Many projects observed increased difficulty when planning did not take into account building the relationship of the consortium partners from the outset, which is necessary to prevent a "silo mentality". Furthermore, it is integral that strong relationships are forged with the participating project municipalities as this improves ownership of the sanitation plans developed, and ensures that they remain relevant to the local context.
- A key component of the ACCESSanitation is the development of City Sanitation Plans in the implementing cities of India and the Philippines. In the ROSA project it was noted that such plans should be considered working documents throughout the lifespan of the project and beyond. As such they should be updated as and when challenges or the need arises, and when key targets are met. This ensures that this document remains context specific and appropriate, and proactively informs development and standards for sanitation at the municipal level. Therefore, while this document should be an integrated and collaborative effort between all relevant line functions and departments, a clear mandate should be given to one department to ensure that this remains highly relevant.
- It has been noted that many municipalities in developing countries do not have a planning culture. However, in addressing this, there is a lack of appreciation on the part of partners that 'Eurocentric' planning processes are seldom transferable, without adaptation to developing countries, in the timeframes available within short and medium term development projects. Ultimately the result is an increased proportion of time attributed to data collection, planning processes, capacity development and writing of technical plans. The aforementioned are often beyond the scope of time and funding allocated to medium term projects and need to be considered prior to project development. Previous sanitation projects such as ROSA ultimately concluded that the planning process itself was not feasible given the resources and localities targeted. In response the CLARA project has been formed, with the objective of developing a simplified planning tool. The aim is that this tool can be utilised by decision makers to assess the comparative cost implications of implementing sanitation solutions, in order that the most suitable intervention can be identified. Within the ACCESSanitation

project it was noted that participating municipalities needed additional capacity building in respect to the development of city sanitation plans. To ensure the sustainability of such processes it would be necessary for additional funding to be sourced, to develop the plans further to a city wide level, and introduce innovative assessment tools that could serve to analyse the respective costs and benefits for technologies considered for local application.

- Training and capacity development on sustainable sanitation is under-represented in academic systems in Africa. While it is not envisaged that the ACCESSanitation project would seek to redress this gap, it is necessary to ensure that future planners do not continue to train in traditional approaches, and look for innovative technologies and processes to address the existing sanitation challenge. Creating demand for sanitation will contribute to the awareness of the need for adapting current curriculums to improve the training of future planners. Previous projects and organisations have created a wealth of online training materials that would serve to educate and capacitate municipal staff in respect to sustainable sanitation. Projects such as NETSSAF have summarised the availability of such resources, which could be disseminated to stakeholders in the ACCESSanitation project through the partners.
- Linking improved service delivery to performance based assessments at the local level can serve to mobilise action. Methods could be explored to implement such initiatives within the ACCESSanitation programme, e.g. competition or award for the most improved service delivery or most innovative award etc.
- Rigorous procurement regulations and corruption at the local level are often barriers to development projects. Formulating a strategy for allocation of resources to the municipal level is, therefore, essential to ensure traditional obstacles are avoided.
- Support for planning processes should be sought from all levels, from national government to the community level, irrespective of the scale of implementation. Forging relationships with national government within the framework of the ACCESSanitation project can serve to enhance prioritisation of sustainable sanitation at national level, and subsequently adoption within national priorities.
- Planning should not be centred on new infrastructure development, but should adequately encapsulate existing infrastructure and also the long term operation and maintenance therein. In the development of the city sanitation plans, existing infrastructure should be considered in the baseline assessment, operation and maintenance planning and financial strategies.

2. Strategies – financing strategies and partnerships

Promoting and strengthening existing partnerships within the sanitation sector is key in the large scale implementation of urban sanitation partnerships. Projects such as ROSA noted the importance of building relationships between municipalities and local research institutes and universities. Key benefits of such actions ensure that researchers are aware of key local challenges and as such can target their research accordingly. This will enable municipalities to benefit from the emerging innovative designs within the field, and establish projects to pilot technologies that have potential to be applied at scale if successful. Further benefits include capacity building for local technical staff and the ability to grow this partnership into

a strong network of key actors within the sanitation sector to the benefit of the local municipality, and ultimately the end-user.

Project reviews also highlight the need to increase the role of the private sector within the context of urban sanitation projects. This can serve to increase both technical and financial capacity at the local level. The degree of participation of the private sector will be dependent upon the local context and should be analysed in detail at the onset of the project.

Financial resources and availability thereof are of key concern in projects with limited budgets and high demand for improved sanitation and adequate solutions. Projects noted a need for increased cooperation between local and national government and recommend the ring-fencing of funds to secure, support and strengthen water and sanitation service delivery. In addition the full water and sanitation market is often not taken into account and needs to be fully explored when implementing projects and programmes, particularly those providing new technologies. If this is not undertaken it is possible that once the project or programme is completed, repairs and services may not be accessible if the whole market has not been assessed and addressed.

Most large scale development projects that work closely with municipalities, cooperate with local political and technical teams in stakeholder identification and implementation of the project activities. The ROSA project, however, included the municipalities as partners within the project consortium. This is an emerging trend increasingly being followed in large scale sectoral projects as it ensures that the actions undertaken within the project are driven and informed by the municipal level and, therefore, are often more targeted at specific local challenges observed and more readily able to adapt to changing and emerging priorities at the local level. Further, it increases adoption of the project activities at the local level through increased awareness of the project and political buy-in (support) on the ground, enhancing the sustainability of the project beyond the envisaged scope of the project. With increased understanding at the local level of the project and its objectives, there is often a corresponding sense of increased ownership of the project, its activities and outputs. As such it is more likely to be embedded within local processes and ensure the adoption and sustainability of operation and maintenance strategies.

Emerging lessons of relevance to the implementation of the ACCESSanitation project:

- Promoting partnerships between municipalities and resource centres is key if they are to build their capacity in respect to sustainable sanitation in the long term. Such relationships however can be difficult to establish and maintain. In ACCESSanitation the partners can direct municipalities to resource centres and institutes, and should be encouraged to develop and/ or strengthen such relationships.
- Stakeholder identification and relationships forged as a result of the project should be maintained. In NETSSAF the project partners utilised the expertise of key stakeholders identified to provide robust feedback on the project outputs. This is a methodology utilised within ACCESSanitation in respect to the Advisory Board. Summarising common observations by the advisory board in reference to their reviews of the local action plans could serve to enhance both the capacity and knowledge of the participating cities. Highlighting common oversights or mistakes that were made, that could inform future

projects. Similarly it would be a useful internal summary document for the project partners informing future interventions in the field.

- There is a need for greater collaboration with the private sector. Dependant on the local institutional context, the partners in ACCESSanitation should seek to assist the municipalities to build relationships with the private sector. Such relationships could result in increased capacity, financial resources, monitoring and evaluation and improved service delivery. Examples could include outsourcing of aspects within the sanitation chain that the municipality is not yet capacitated to implement. Through the European Commission funded Local Initiatives⁷³ project, undertaken in partnership with ICLEI-Local Governments for Sustainability-Africa and the United Cities and Local Governments of Africa (UCLGA), a series of three case studies highlighting innovative service delivery in water sanitation were developed. In one of the case studies undertaken in Benin, a municipality sought to develop a local sanitation plan. Through the baseline assessment stage the municipality identified a number of private organisations and SME's that could take responsibility for components of the sanitation service chain. In this case it was in relation to solid waste management. However, there are many examples of such organisations entering the market place to provide services such as sludge removal in informal and peri-urban settlements in developing countries.
- Encouraging a competitive sanitation market at the local level results in improved service delivery. Opportunities to develop such markets should be considered within the development of the city sanitation plans.
- Adequate financial planning should be undertaken within the development of local plans and future operation and maintenance of systems considered to allow municipalities to ring fence funds for the sector, rather than reactionary responses to the need for funding in the sector
- The issues of land rights and formality of the settlement (e.g. do the community have land tenure) should be at the forefront when considering interventions and pilot projects. It is not sustainable to invest in sanitation solutions in locations that will only be temporary residences for its population. In such cases residents would benefit from awareness raising campaigns in respect to good sanitation and hygiene practice.

3. Implementation – improved governance; communication; sustainable and innovative technologies.

Community involvement in projects is critical to the success and sustainability of any project or programme. In particular communities need to be involved in planning and capacitated to understand new technologies that are introduced, enhancing their acceptability and the adoption of associated behaviour change. Furthermore, communities should be capacitated at a local scale to be able to undertake repairs and maintain infrastructure so that there is no lag time when repairs are required, thereby reducing costs. Political buy-in is required from the onset of any planned interventions and should align with national government's policies, frameworks and priorities. Well planned awareness campaigns can go a long way towards addressing both stakeholder and political buy-in. Lastly, projects and programmes

⁷³Local Initiatives in the Promotion of the Attainment of the Water and Sanitation Millennium Development Goals. Additional information can be found at www.iclei.org/africa

that do not build existing strategies and sustainability assurances into their design are not likely to succeed.

The first step in any urban sanitation project should be the formulation of a stakeholder engagement strategy followed by a detailed analysis of key relevant local and regional stakeholders within the sanitation sector. Within NETSSAF, project partners developed a well-defined and highly transferable stakeholder identification and analysis strategy, identifying primary and secondary stakeholders. This would be applicable within the context of the ACCESSanitation project. Furthermore, such strategies should be clearly linked with the projects communication strategy.

Building inclusivity within the context of ACCESSanitation and other urban sanitation projects is key to the success of the initiative. The ROSA project observed that a large team of 8-10 individuals from the local area working for the project within the municipality assisted in ensuring that the project achieved its envisaged goals. Through their knowledge of the local procedure and processes, they were able to up-scale both the local context and key challenges to the project consortium, ensuring that actions were well targeted and facilitated implementation on the ground. Nevertheless, while such large teams are valuable, they have financial implications and necessitate an analysis of the trade-offs.

Linked to partnership and communication, a key lesson observed from the review is the formulation of sanitation databases and networks. ACCESSanitation can link into these networks to facilitate dissemination of key project outputs and further utilise the intuitional knowledge that has been gathered to facilitate actions within the context of implementing the ACCESSanitation project. It ensures that key stakeholders previously identified are known to the project partners and can serve to improve integration and collaboration with key actors in the urban sanitation sector.

Emerging lessons of relevance to the implementation of the ACCESSanitation project:

- Past projects note locating interventions within, or in close proximity to municipalities with which you have previously worked can contribute to sustainability of the action. While the pilot project locations for ACCESSanitation are already underway, future initiatives by the project partners should take cognisance of whether proximity would enable the partners to monitor the operation and maintenance of the system for a period beyond the close of the project.
- More emphasis needs to be placed on software activities, with donors, project partners and municipalities focusing only on hardware in many instances. Irrespective of whether hardware is selected for implementation, there should be a corresponding awareness raising strategy. This should be incorporated within the design of the city sanitation plans.
- In cases where the municipality assigns ownership (caretaking) of the installation, this has been shown to improve sustainability, particularly when this remains in place beyond the scope of the project.
- NETSSAF formulated a comprehensive evaluation of existing and innovative sanitation technologies, which is available online. Such documents should be disseminated to the participating municipalities, to inform them of the pro's and con's of implementing various systems and facilities

The literature reviewed above and the extrapolation of key lessons learnt, highlight that there is a need to redress a number of issues that frequently emerge in urban sanitation projects. With the existing backlog and increasing demand for sanitation services and coupled with increased urbanisation, it is imperative that key actors within the sector work in a co-ordinated and integrated manner, taking cognisance of previous experiences to improve their current work in order to prevent ‘re-inventing the wheel’.

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7. Annex 1 – additional project information

7.1 Resource-Oriented Sanitation concepts for peri-urban areas in Africa (ROSA)

Background	-
Partners	<ul style="list-style-type: none"> • University of Natural Resources and Applied Sciences Vienna (BOKU), Institute of Sanitary Engineering and Water Pollution Control, Austria • Hamburg University of Technology, Institute of Wastewater Management and Water Protection, Germany • EcoSan Club, Austria • London School of Hygiene and Tropical Medicine, Disease Control & Vector Biology Unit, Department of Infectious and Tropical Diseases, United Kingdom • WASTE, Advisors on Urban Environment and Development, The Netherlands • University of Dar es Salaam, Department of Water Resources Engineering, Tanzania • Makerere University, Department of Civil Engineering, Uganda • Egerton University, Department of Water and Environment Engineering, Kenya • Arbaminch University, Research & Publication Coordination Department, Ethiopia • Kitgum Town Council, Uganda • Arusha City Council, Tanzania • Municipal Council of Nakuru Department of Environment, Kenya • Arba Minch Water Supply and Sewerage Enterprise, Ethiopia
Additional information	-
Contacts	-n/a

7.2 Network for the development of Sustainable approaches for large Scale Implementation of Sanitation in Africa (NETSSAF)

Background	<p>The sustainable planning manual outlines seven planning steps that can be applied at the local level, with a supporting tutorial available to support the process at www.netssaf.net.</p> <ul style="list-style-type: none"> • Step 1: Project start and launch of planning process
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	<ul style="list-style-type: none"> • Step 2: Creation of demand for sustainable sanitation • Step 3: Description of settlement, assessment of existing sanitation situation and user priorities • Step 4: Identification of feasible sanitation concepts and services • Step 5: Consolidation and finalisation of implementation plans for sustainable sanitation • Step 6: Implementation • Step 7: Participatory monitoring and evaluation
Partners	<ul style="list-style-type: none"> • Technology Transfer Centre (TTZ) Bremerhaven, associated to the University of Bremerhaven, Germany • Hamburg University of Technology (TUHH), Germany • Centre for low cost Water supply and sanitation (CREPA), Burkina Faso • BioAzul (BioAzul), Spain • Ouest-Africain d'Appui Organisationnel et de Technologies Appropriées (BOATA), Mali • International Ecological Engineering Society (IEES), Switzerland • International Water Association (IWA), United Kingdom • Université Abobo-Adjamé (UAA), Côte d'Ivoire • Sveriges Lantbruksuniversitet (SLU), Sweden • Commune De Matam (MTM), Sénégal • Swiss Federal Institute of Aquatic Science and Technology (EAWAG), Switzerland • Commune de Bobo-Dioulasso (Ville de SYA), Burkina Faso • EcoSan Club Austria (ESCA), Austria • Kwame Nkrumah University Of Science And Technology (KNUST), Ghana • University of Leeds (Uleeds), United Kingdom • Université de Ouagadougou- Centre d'Etudes pour la Promotion, l'Aménagement et la Protection de l'Environnement (CEPAPE), Burkina Faso • Stockholm Environment Institute (SEI), Sweden • Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (GTZ), Germany, now known as GIZ • Tampere University of Technology (TUT), Finland
Additional information	-
Contacts	Details can be found on the project website http://www.netssaf.net/index.php?id=3&L=0

7.3. Development Aid and Access to Water and Sanitation in Sub-Saharan Africa

Background	This was a 15 month study funded by the African Development Bank (AfDB) that was completed in 2008. It examined the trends in access to water and sanitation in Sub-Saharan Africa through desktop research that was initially
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	<p>undertaken and was followed by field research in Burkina Faso, Kenya, Madagascar and Uganda. The study aimed to: i) identify the factors determining performance in the provision of safe water and improved sanitation facilities; ii) identify the factors and features determining the success and sustainability of aid-funded projects in these sectors; and iii) draw lessons for the design and implementation of future water and sanitation interventions⁷⁴.</p> <p>A number of interesting findings have emanated from this study, including:</p> <ul style="list-style-type: none"> • High population growth rates are placing increasing pressure on water and sanitation services/systems delivery. • Limited financial and human capacity to carry out donor funded projects and programmes at national and local levels (including NGOs, government and private institutions). • Limited human capacity to implement existing water and sanitation strategies and policies. • Limited technical capacity in water and sanitation hinders effective service delivery. • Limited financial accountability and transparency along with slow procurement processes hampers effective service delivery. • Increased investment in sanitation facilities was highlighted as an urgent need for Uganda and Burkina Faso (particularly in rural areas in Burkina Faso)⁷⁵.
Partners	-
Additional information	http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/WPS%20140%20Development%20Aid%20and%20Access%20to%20Water%20ONV1%2022.pdf
Contacts	Coordinator: Adeleke Salami

7.4 The National Bucket Sanitation Replacement Programme (South Africa)

Background	<p>This was a national programme that implemented 350 projects throughout South Africa, funded by the National Treasury, over the period of 2005-2010. It allocated a substantial budget of ZAR 1.8 billion⁷⁶ towards replacing the bucket toilets⁷⁷ in formal settlements in seven provinces and 80 municipalities⁷⁸. The programme was successful in replacing buckets with water-borne sanitation systems and some with Ventilated Improved Pit (VIP) latrines. Municipalities were successful in spending more than double their usual average expenditure within the water and sanitation sector (WSS) on a sustained basis over three years. This was a collaborative programme with strong support from government, the private sector and</p>
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⁷⁴Stampini, M. Salami, A. and Sullivan, C. 2009. Development Aid and Access to Water and Sanitation in Sub-Saharan Africa. AfDB Development Research Brief number 9.

⁷⁵Salami, A. Stampini, M. Kamara, A. Sullivan, C. and Namara, R. 2011. Development Aid and Access to Water and Sanitation in Sub-Saharan Africa. AfDB.

⁷⁶This was allocated over three financial years 2005-2008.

⁷⁷These bucket toilets were a relic of the limited infrastructural planning afforded to formal settlements during the apartheid era prior to 1994 in South Africa.

⁷⁸WIN-SA. 2008. The National Bucket Sanitation Replacement Programme Lessons learnt. Department Water Affairs and Forestry, Republic of South Africa.

	local communities.
Partners	<ul style="list-style-type: none"> Department of Water Affairs and Forestry (DWAF), the Department of Provincial and Local Government (DPLG) and the National Treasury
Additional information	-
Contacts	Chief Directorate: Sanitation 012 336 8811

7.5 USAID Hygiene Improvement Project (HIP)

Background	<p>The USAID Hygiene Improvement Project summarised the following⁷⁹:</p> <ul style="list-style-type: none"> Pioneered an “at scale” approach in Ethiopia and Madagascar. This involved developing approaches for implementing hygiene and sanitation improvement through a whole systems approach, rather than targeting pieces of the problem - engaging multiple sectors, actions, options, and stakeholders in defining the problem and agreeing on the solutions. These two countries provided unique opportunities to implement the scale approach, which yielded valuable lessons and replicable tools for other countries. HIP sought opportunities to create a market for sanitation products and services and built capacity and financing options so these markets can develop and flourish. They engaged in field sanitation programs in four countries—Ethiopia, Madagascar, Uganda, and Peru - to identify the particular needs of a given community in terms of sanitation options, the suppliers of goods and services that would be required to deliver these options, and the motivations that go beyond health concerns that lead a household to adopt new technologies. Technical support for hygiene improvement programming. This was done through providing support and capacity strengthening to NGOs and networks working in the field, sharing knowledge about best practices with program managers, organizations, and donors involved in hygiene improvement at international, national, regional, and community levels. Activities included participation in global and national WASH-related events and conferences, its monthly Hip-Lights newsletter and other products, project website, and e-learning events such as e-conferences and webinars.
Partners	<ul style="list-style-type: none"> Academy for Educational Development in partnership with ARD Inc., the IRC International Water and Sanitation Centre in the Netherlands, and the Manoff Group
Additional information	http://www.hip.watsan.net/
Contacts	MerriWeinger USAID Hygiene Improvement Project Academy for Educational Development 1825 Connecticut Avenue, NW

⁷⁹Salami, A.; Stampini, M.; Kamara, A.; Sullivan, C.; Namara, R. (2011): *Development Aid and Access to Water and Sanitation in Sub-Saharan Africa*, AfDB

	Washington, DC 20009-5721 Tel. 202-884-8000; Fax: 202-884-8454 hip@aed.org - www.hip.watsan.net
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7.6 Research-inspired Policy and Practice Learning in Ethiopia and the Nile Region (RiPPLE)

Background	-
Partners	<ul style="list-style-type: none"> • Overseas Development Institute (ODI); • WaterAid Ethiopia; • Institute of Development Research of Addis Ababa University (IDR); • Benishangul-Gumuz Water Bureau, Ethiopia; • British Geological Survey (BGS), UK; • Ethiopian Catholic Secretariat; • Ethiopia Country Water Partnership (ECWP), Ethiopia; • Institute of Development Studies (IDS), University of Sussex, UK; • International Water Management Institute (IWMI), Ethiopia; • MetaMeta Consulting, the Netherlands; • NekemteHosana Catholic Secretariat; Ethiopia; • Oromia Water Bureau, Ethiopia; • Practical Action; Kenya and UK; • Research and Development Department of the Federal Ministry of Water Resources, Ethiopia; • SodoHosana Catholic Secretariat, Ethiopia; • Southern Nations and Nationalities Peoples Region (SNNPR) Water Bureau, Ethiopia; • Water and Sanitation Programme (WSP), Ethiopia and Africa Region.
Additional information	E-Source WASH News and Features http://www.source.irc.nl/page/31618 ; http://www.rippleethiopia.org/page/home-page
Contacts	-

7.7 Lake Victoria Water and Sanitation Initiatives Project (LVWATSAN)

Background	<p>The LVWATSAN initiative focuses on capacity building; project design, planning and implementation; and follow-up investments. With a growing awareness of the benefits of a regional approach among East African Community countries, regional training and capacity building initiatives are initiated, with emphasis on regional networking, and cooperation in protecting and managing a shared resource – Lake Victoria⁸⁰.</p> <p>The project has two phases namely⁸¹:</p> <p>Phase I of the Lake Victoria Region Water and Sanitation Initiative ran from 2004 – 2010. Between 2004 and 2007, in consultation with national and</p>
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⁸⁰UN-HABITAT. 2010. Lake Victoria Water and Sanitation Initiatives Project. Available at <http://www.unhabitat.org/content.asp?cid=2289&catid=462&typeid=24&subMenuId=0>

⁸¹ UN-HABITAT. 2010. Lake Victoria Water and Sanitation Initiatives Project. Available at <http://www.unhabitat.org/content.asp?cid=2289&catid=462&typeid=24&subMenuId=0>

	<p>local authorities and local stakeholders, an initial assessment was undertaken to identify WATSAN investments and related capacity building needs in 30 preselected secondary towns, through questionnaires, interviews and meetings. The assessment concluded that the towns needed urgent strategic WATSAN Initiatives.</p> <p>Phase I of LVWATSAN Initiatives were then implemented in 10 secondary towns in Kenya, Uganda and Tanzania. In most towns short-term interventions have been completed, comprising rehabilitation and expansion of existing infrastructure. Long-term interventions will begin in 2013, and comprise significant investments in infrastructure to reach the unserved parts of the population.</p> <p>Phase II began preparation in 2011 and is going to be carried out under the regional cooperative framework of the East African Community, the Lake Victoria Basin Commission (see link EAC-LVBC). It targets 15 towns and includes Rwanda and Burundi, with both short-term and long-term interventions. Phase II of LVWATSAN has been borne out of:</p> <ul style="list-style-type: none"> • Replication: From the lessons learnt in the implementation of Phase I LVWATSAN Initiatives, it was necessary that the success cases be replicated while mitigating against the negative impacts • Improving Coverage: Phase I addressed the needs of 10 towns, and therefore the rest of the towns still required the implementation of the LVWATSAN Initiatives • Expansion: The expansion project is to be implemented under Phase II to cover 15 towns, 3 from each Partner State, to meet the MDGs and ensure the long term sustainability and physical interventions <p>Funding⁸²:</p> <p>The financial resources necessary for the implementation Phase I of the programme were provided by:</p> <ul style="list-style-type: none"> • the Government of the Netherlands, • UN-HABITAT, • the Governments of Kenya, Uganda and Tanzania, • the local governments and utility companies in the towns; and • the programme beneficiaries. <p>By May 2009, the contributions amounted to slightly over USD 29 Million. Phase II formulation has been funded by AWF of ADB at about 1 million Euros, while the implementation is also bound to be financed by the same development partner. The level of support will depend on the cost estimates of the project formulation from Consultant, though an estimate of 65 million Euros has been made.</p>
Partners	Project Management framework has been arranged so that: LVBC as the apex institution of EAC responsible for WATSAN projects in LV Basin, will be the Executing Agency
Additional information	Lake Victoria Basin Commission: http://www.lvbcom.org/index.php?option=com_content&view=article&id

⁸²UN-HABITAT. 2010. Lake Victoria Water and Sanitation Initiatives Project. Accessible at: <http://www.unhabitat.org/content.asp?cid=2289&catid=462&typeid=24&subMenuId=0>

	<p>=72&Itemid=82 UN-HABITAT: http://www.unhabitat.org/content.asp?cid=2289&catid=462&typeid=24&subMenuId=0 AfDB: http://www.afdb.org/en/projects-and-operations/project-portfolio/project/p-z1-ea0-004/</p>
Contacts	-

7.8 Water, Sanitation and Hygiene Technologies Research Project (WASHTech)

Background	<p>The specific objectives of the WASHTech project are summarised as follows⁸³:</p> <ol style="list-style-type: none"> 1. To strengthen capacity within the sanitation sector to implement effective investments in new sanitation technologies via the following processes: <ul style="list-style-type: none"> • Develop a framework with the aim of assessing emerging innovative and new WASH technologies entitled the 'Technology Assessment Framework' which provides an objective review of technologies for key actors in the sector • Analyse existing and emerging approaches to implementation of decentralised approaches and sustainable application thereof at scale • Build and increase capacity in the target regions of Burkina Faso, Uganda and Ghana 2. Develop innovative strategies for scaling up of the aforementioned approaches with an in-depth analysis of applicable approaches, timeframes and successful strategies to embedded sustainability within the process.
Partners	<ul style="list-style-type: none"> • Centre Régional pour l'Eau Potable et l'Assainissement à faible coût (CREPA) in Burkina Faso; • Network for Water and Sanitation (NETWAS), Uganda; • Training, Research and Networking for Development (TREND), Ghana; • Kwame Nkrumah University of Science and Technology (KNUST), Ghana; • WaterAid in Ghana, Uganda and Burkina Faso. • European partners include IRC in The Netherlands (coordinating the project), SKAT Foundation in Switzerland, Cranfield University and WaterAid in the United Kingdom.
Additional information	<p>Creation project website: http://washtechafrika.wordpress.com/ Communication strategy report: WASHTechcomms strategy 20110610 Project leaflet: WASHTech 110325 leaflet v5 Final WASHTech web pages: http://washtechafrika.wordpress.com/</p>

⁸³WASHTech website. 2011. Accessible at: <http://washtechafrika.wordpress.com/>

	European Commission Cordis: http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_EN&ACTION=D&DOC=3&CAT=PROJ&QUERY=0133ea4798bc:54ca:20cd5052&RCN=97387 WASHTech Africa: http://washtechafrica.wordpress.com/
Contacts	Debby Gruiters (Tel.: +31-0703044016) IRC International Water and Sanitation Centre in The Netherlands Jo Smet: smet@irc.nl

7.9. Capacity-Linked Water and Sanitation for Africa's Peri-Urban and Rural Areas (CLARA)

Background	The specific objectives of the CLARA project include the following ⁸⁴ : <ul style="list-style-type: none"> • An assessment and where applicable adaptation of decentralised integrated water supply and sanitation planning approaches for small rural and peri-urban communities • Assessment of reducing risks in water use and reuse of sanitation products with low cost and innovative technologies • Field test and evaluate implementation of the local planning framework in different geographical African regions, taking cognisance of local economic, social and cultural disparities
Partners	<ul style="list-style-type: none"> • University of Natural Resources and Life Sciences Vienna (BOKU University), Institute of Sanitary Engineering and Water Pollution Control, Austria. • TTZ Bremerhaven, Germany; • EcoSan Club KG, Austria; • Bioazul S.L., Spain; • Centre of Biotechnology of Sfax, Tunisia; • Egerton University, Department of Water and Environmental Engineering, Kenya; • Water Research Commission, South Africa; • Centre Régional pour l'Eau Potable et l'Assainissement à faible coût, Burkina Faso; Office National de l'Eau Potable, Morocco; <ul style="list-style-type: none"> • Arba Minch University, Ethiopia; • Arba Minch Water Supply and Sewerage Enterprise, Ethiopia; • Arba Minch Town Municipality, Ethiopia; • 'Engan New Mayet' Compost Production Youth Association, Ethiopia; • 'Wubet le Arba Minch' Solid Waste Collectors Association, Ethiopia; • Arba Minch Health Center, Ethiopia.
Additional information	CLARA project website http://clara.boku.ac.at/ European Commission Cordis http://cordis.europa.eu/fetch?CALLER=FP7_PROJ_EN&ACTION=D&DOC=42&CAT=PROJ&QUERY=0125a0c2784a:b9ef:0738cd0a&RCN=98911
Contacts	Guenter Langergraber (Tel: +43-1476545814), guenter.langergraber@boku.ac.at

⁸⁴CLARA project website. 2011. Accessible at: <http://clara.boku.ac.at/>

