African Water Facility
Facilité africaine de l'eau
Mobilising Resources for Water in Africa
Mobiliser des ressources pour l'eau en Afrique

Un-sewered Sanitation Improvements for the Urban-Poor

Overview of the African Water Facility project portfolio

July 2014

Portfolio Report

Acknowledgements

This report was prepared by Sophie Trémolet, Marie-Alix Prat and Goufrane Mansour from Trémolet Consulting, under the supervision of Dr. Akissa Bahri (Coordinator, AWF), and in collaboration with AWF sanitation experts, including Ousseynou Guene (Principal Sanitation Specialist), Franz Höllhuber (Principal Water and Sanitation Specialist), and Maureen Ntege-Wasswa (Senior Water and Sanitation Engineer).

The results and conclusions of this report are based on a thorough analysis of 14 African Water Facility (AWF) urban sanitation projects in 11 sub-Saharan African countries. It also integrates the input provided by 50 sanitation experts and decision-makers who participated in an urban sanitation workshop organised by the AWF in Accra, from February 26 to 28, 2014. This event was organised with the support of Germaine Diah (Senior Operations Assistant, AWF) and staff of the AfDB Ghana field office.

About the African Water Facility

The African Water Facility (AWF) is an initiative of the African Ministers' Council on Water (AMCOW) hosted and administered by the African Development Bank (AfDB). The AWF was established in 2004 as a Special Water Fund to help African countries achieve the objectives of the Africa Water Vision 2025 through the mobilisation of resources, the promotion of water knowledge and the improvement of water governance. Since 2006, the AWF has funded 91 national and regional projects in 51 countries, including in Africa's most vulnerable states. It has mobilised more than €937 million as a result of its project preparation activities, which constitute 70 percent of its portfolio. On average, each €1 contributed by the AWF has attracted €30 in additional follow-up investments.

The AWF is funded by Algeria, Australia, Austria, the Bill and Melinda Gates Foundation, Burkina Faso, Canada, Denmark, the European Commission, France, Norway, Senegal, Spain, Sweden, the United Kingdom, and the African Development Bank. The AWF is governed by a Governing Council representing its 15 donors, UN-Water Africa, the AU via NEPAD, AMCOW and the AfDB.

For more information, visit: www.africanwaterfacility.org

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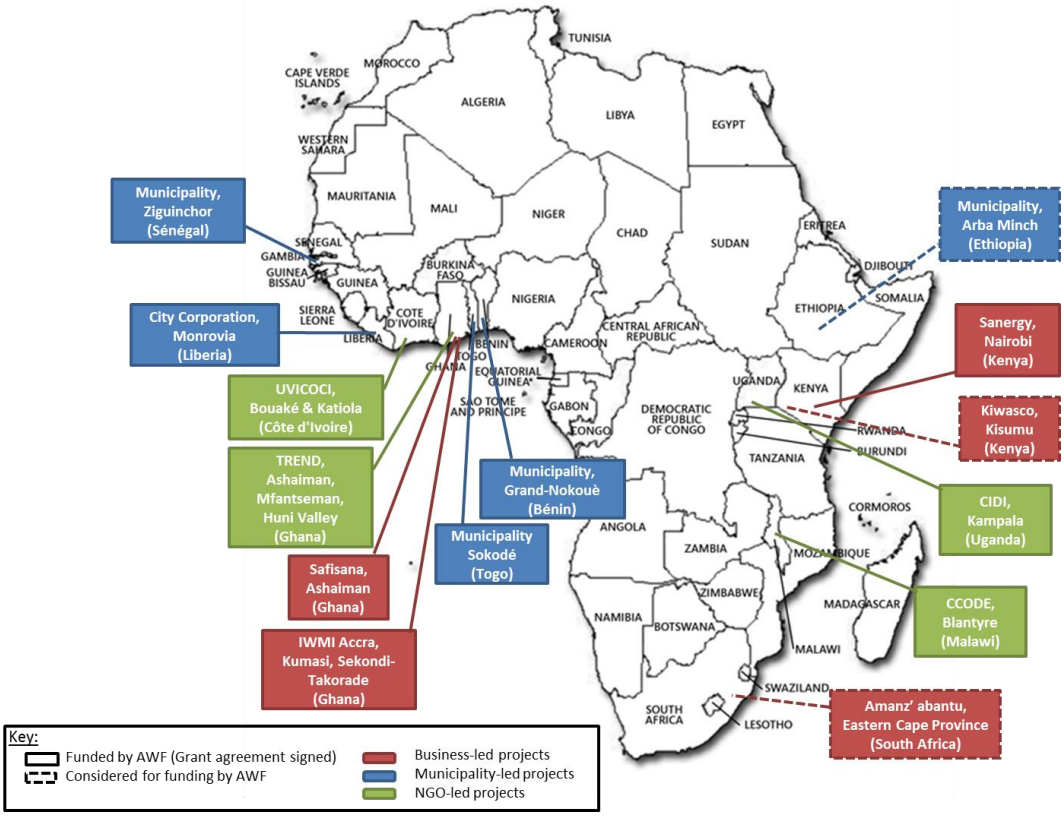
Executive Summary

The African Water Facility (AWF) is an African Ministers' Council on Water (AMCOW) initiative administered by the African Development Bank (AfDB). The AWF is currently supporting 14 innovative urban sanitation projects aiming at improving the management of excreta in poor urban areas in Africa. To date, three projects are being completed, eight projects have been approved and are now at early stages of implementation and three are going through approval. Up to March 2014, AWF had committed EUR 11.87 million to urban un-sewered sanitation projects, which represents 38% of its total water and sanitation services portfolio. In total, the funded projects are expected to directly benefit 2.9 million people in sSub-Saharan Africa. The projects that make up AWF's Urban Sanitation Portfolio (USP) are distributed throughout sub-Saharan Africa, as shown in Figure 3 below. The intention is to scale-up or replicate the projects to reach a higher target population throughout sub-Saharan Africa.

Figure 1. Map of AWF- funded municipal un-sewered sanitation projects

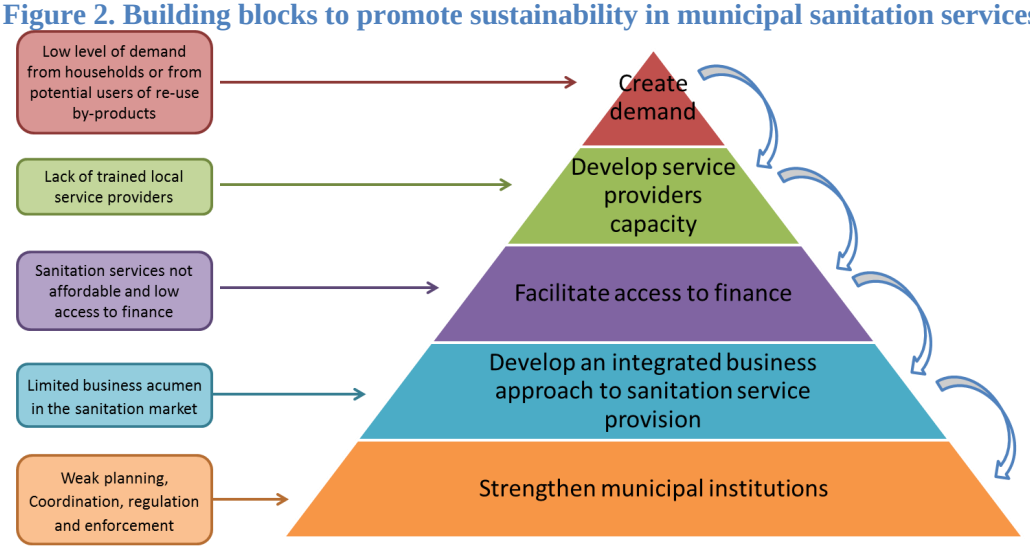


The present report seeks to capture emerging lessons from the design and implementation of these projects, with a particular focus on identifying how the projects have incorporated strategies to promote sustainability. As most projects are still being implemented, however, their design is likely to evolve and implementation results have yet to be evaluated.

The AWF-funded urban sanitation portfolio includes a broad mix of projects that are intervening at different steps of the sanitation value chain, both on the demand and on the supply sides of the market, with a view to promote an integrated approach to urban sanitation service provision. Although they all have correctly identified the need to strengthen municipal governments, these projects are being implemented through a mix of institutional models (business-led, NGO-led or municipality-led). These projects test and implement different approaches to improving the sustainability of sanitation services along the complete value chain, including through testing alternative business models and safe reuse approaches, as well as social, institutional, financial and technical innovations.

The figure below presents five main strategies that are being used by the USP projects to foster sustainability (these are also referred to as "building blocks"). The main point of entry for any project is usually to create demand (the tip of the triangle below), but other strategies allow providing a stronger basis for sustainability. The foundations of a sustainable approach are to strenghten municipal institutions so that they can provide a favourable environment for all of these activities to be delivered on an ongoing basis. This is also where most challenges lie, as municipal capacity and policies are influenced by other factors beyond the sphere of sanitation.

Figure 2. Building blocks to promote sustainability in municipal sanitation services



The starting point to build sustainable sanitation services is to stimulate demand for sanitation products and services, including for FS reuse products. Most of the projects are going beyond simple Information, Education and Communication (IEC) campaigns and are looking to develop marketing strategies focused on creating demand for a defined sanitation service or product. Some projects have designed demand-responsive latrines tailored to the needs of the local communities (such as Sanergy with the Fresh Life toilet, or CCODE with the SkyLoo toilet). To set the right price, projects have adapted pricing structures to what their customers can afford, by introducing financing facilities to allow spreading payments over time for example. Innovative promotion activities have also been set up. They aim at promoting a specific product or service to a defined customer segment. Sanergy, for example, has developed an aspirational marketing campaign to promote the "Fresh Life" brand, which was designed to create an aspiration for sanitation and generate positive emotional reactions towards sanitation in users' minds. They use different communication channels, such as branding and advertising, personal sales and promotion, that are stronger triggers for behavioural changes. Sanergy and Safisana (along with 6 other less mature projects) are also seeking to develop marketing of FS reuse products.

The second "building block" for sustainability of urban sanitation projects is to develop service providers' capacity. In small and medium towns of sub-Saharan Africa, supply of sanitation services is not adequate to respond to growing demand. Sanitation service providers are often small enterprises that lack business and management skills. Most AWF-funded projects create opportunities for micro and small entrepreneurs to 1) mobilise communities, sell latrines and provide microfinance, 2) construct latrines, 3) operate public latrines and 4) empty latrines and transport FS. Four projects, including those implemented by Safisana (Ashaiman, Ghana), Sanergy (Nairobi, Kenya), Amanz' abantu (Eastern Cape, South Africa) and Kiwasco (Kisumu, Kenya) are actively engaging with SMEs through a franchise model to support sanitation entrepreneurs through the value chain. Others projects such as those implemented by the municipalities of Grand Nokoué (Benin), Monrovia (Liberia) and Ziguinchor (Senegal) are involved more specifically in the professionalisation, organisation and licencing of mechanical emptiers.

The third "building block" aims at facilitating access to finance, for users to finance their latrine and for service providers to develop their business. Two NGO-led projects implemented by CCODE (in Blantyre, Malawi) and TREND (in Ghana) have provided micro-loans to households to buy latrines through local revolving funds, with mixed results. Many new projects are looking to develop sanitation microfinance for households using a Revolving Fund and working with MFIs or saving groups. Additional market research would help better identify financing needs and structuring the loans to ensure the sustainability of the microfinance schemes. Other projects aim to support SMEs access to finance by providing them with financing solutions tailored to their business needs, in particular to finance their assets. The Monrovia City Council project and the Kisumu and Kampala projects are looking to lease trucks to emptiers. Sanergy in Kenya has developed an innovative approach that uses an on-line lending platform to provide zero-interest loans to its operators to finance the latrine. With AWF funding, Amanz' abantu in South Africa will scale up a franchise model as another strategy for supporting SMEs.

The fourth building block is to develop an integrated business approach to sanitation service provision. Sanitation services are often provided by informal SMEs which have limited business drive and limited in scale. Developing innovative "business models" in the sanitation sector entails finding new ways of scaling up the delivery of sanitation services, combined with a sustainable financing strategy, so as to ensure service provision at the level of an entire city (region or country) at an affordable price for customers. The "business-led" projects funded by AWF have tended to adopt an integrated approach to sanitation, including offering services from demand creation to reuse (Safisana, Sanergy, Amanz' abantu, Kiwasco). In these projects, vertical integration is developed as a strategy to strengthen the sustainability of the business. Indeed, as faecal sludge management may not be a very profitable activity in itself, combining it with other activities, such as FS reuse for instance, can allow generating additional revenues from selling FS by-products to cover part of the operations costs of collection and treatment. But perhaps, more importantly, combining FS reuse with upstream activities allows the businesses to secure a more reliable input flow of FS for their reuse activities. Sanergy and Amanz' abantu have also adopted an innovative "social franchise" model as a way to scale-up a business approach to servicing sanitation facilities.

Finally, the fifth and last building block is to strengthen municipal institutions. In the majority of towns where the AWF projects are operating, municipalities are not playing their role adequately because of weak implementation and enforcement capacity and a lack of technical expertise on sanitation. In addition, municipalities often have unclear or shifting priorities, which affect the delivery of sanitation services. The absence of such a favourable "supporting environment" threatens the sustainability of sanitation services. AWF-funded projects always involve municipalities in recognition of the key role they have to play to support sustainability. Two main types of measures are planned or have been taken to strengthen municipal institutions: capacity building and setting up sanitation coordination platforms led by municipalities. The TPP project (TREND, Ghana) has set up an interesting "tri-partite" approach involving the public, private and NGO sectors to improving sanitation. "Learning Alliances" have successfully been formed at municipal level as a multi-stakeholder platform for consultation and coordination.

In summary, it is too early to draw definitive conclusions about whether the strategies deployed by the AWF-funded projects have been successful at fostering sustainability. In some cases, it is too early in the life of the projects, whereas in the case of completed projects, an independent and in-depth evaluation of the projects' results is usually missing. Such evaluations should be done in years to come, as the AWF portfolio of projects provides an invaluable opportunity to better understand what works in terms of promoting un-sewered urban sanitation in sub-Saharan Africa and beyond. Learning from this diverse set of projects will enable us to draw conclusions on a wide range of publicly-funded sanitation activities and on business models for sustainable sanitation service delivery. To stimulate innovation, the AWF and other funders may also need to explore alternative ways of financing such approaches aside from traditional grant-making, including through outcome-based grants, challenge funds or innovation prizes.

Abbreviations

ASHMA	Ashaiman Municipal Assembly
AfDB	African Development Bank
AWF	African Water Facility
CBE	Community-based Enterprises
CBO	Community-based Organisation
CCODE	Centre for Community Organisation & Development (Malawi)
CIDI	Community Integrated Development Initiatives (Uganda)
FS	Faecal Sludge
FSM	Faecal Sludge Management
FSTP	Faecal Sludge Treatment Plant
IEC	Information, education and communication
IWMI	International Water Management Institute
JMP	Joint Monitoring Programme
KPA	Kampala City Authority
KUPSIP	Kawempe Urban Poor Sanitation Improvement Project (Uganda)
KVIP	Kumasi Ventilated Improved Pit latrine
MCC	Monrovia City Corporation (Liberia)
MFI	Micro Finance Institutions
MHPF	Malawi Homeless People's Federation (Malawi)
MMDA	Municipal
NGO	Non-Governmental Organisation
NWSC	National Water and Sanitation Company (Uganda)
O&M	Operation and Maintenance
PAD	Project Appraisal Document
PPP	Public Private Partnership
SME	Small and Medium Enterprise
SSA	Sub-Saharan Africa
TPP	Tri-Partite Project (Ghana)
TREND	Training, Research and Networking for Development (Ghana)
USP	Urban Sanitation Portfolio
UVICOCI	Union des Villes et Communes de Côte d'Ivoire
VIP	Ventilated Improved Pit Latrine
WMT	WASH Management Team
WWTP	Waste water Treatment Plant

1. Introduction

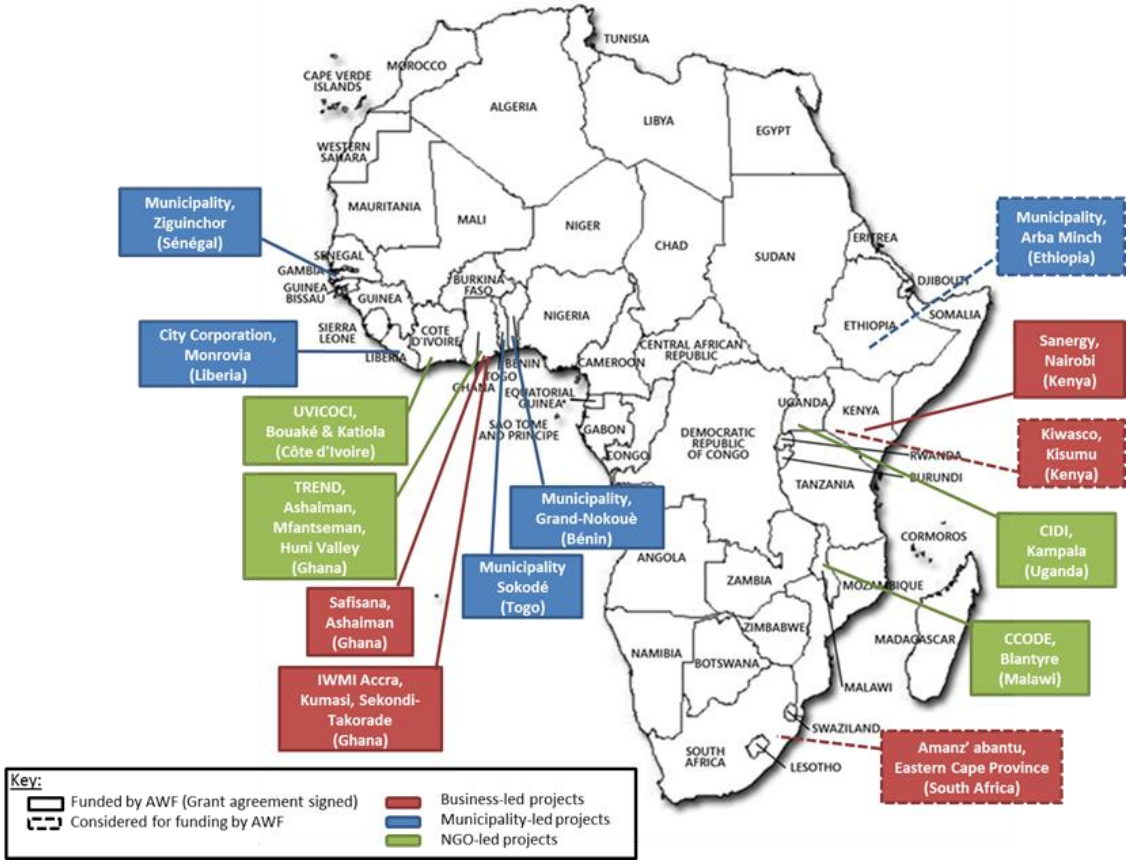
1.1. Context: The urban sanitation challenge in sub-Saharan Africa

Africa is the fastest urbanising continent. By 2030, Africa's urban population will roughly double to 750 million. With the exception of Northern Africa, the majority of the urban poor in sub-Saharan Africa (SSA) live without basic services like potable water supply and improved sanitation. Only about 8% of the people in urban Africa use sewered sanitation (Sandec, 2006), and universal sewerage is not attainable. The JMP (2013) report shows that, in 2011, about 42% of urban dwellers in SSA depended on on-site sanitation technologies consisting mainly of pit latrines, pour flush toilets and septic tanks; with ever increasing numbers. Consequently, large quantities of faecal sludge (FS) are produced within the urban settlements and are not properly disposed. Untreated FS threatens the well-being of both humans (especially children and the urban poor) and the environment.

1.2. Overview of the AWF-funded Urban Sanitation projects

The African Water Facility (AWF) is an African Ministers' Council on Water (AMCOW) initiative administered by the African Development Bank (AfDB). The AWF is contributing to the improvement of living conditions and livelihoods of the urban poor population in sub-Saharan Africa by supporting projects promoting fully integrated and sustainable Faecal Sludge Management (FSM) systems with reuse under its Urban Sanitation Portfolio (USP). In 2011, AWF launched a call for proposals to support innovative urban sanitation projects aiming at improving the management of excreta in poor urban areas in Africa. The process generated 122 proposals from 28 countries. Among these proposals, 11 were shortlisted (9%), which extended the AWF urban sanitation portfolio to 14. To date, 3 projects are being completed (they were started before the call), 8 projects have been approved and are now at early stages of implementation and 3 are going through approval. The geographical distribution of these projects is shown on the map in Figure 3 below.

Figure 3. Map of AWF- funded municipal un-sewered sanitation projects



Overall, to date, the AWF WSS portfolio counts 29 projects (EUR 31.45 million) of which 16 (EUR 15.5 million) have been completed and 13 (EUR 15.9 million) are ongoing. As at 31st March 2014, the AWF had committed EUR 11.87 million to urban sanitation projects, which represents 38% of their WSS portfolio. If approved, the 3 additional projects will bring the USP portfolio to EUR 14.44 million. In total, the funded projects are expected to benefit 2.9 million people in sub-Saharan Africa. This number is expected to go up to 3.2 million people when the 3 additional projects are approved. AWF provides on average a EUR 1 million grant to these projects (ranging between EUR 500,000 and EUR 2 million). AWF funding contributes to an average 65% of the project's total budget (ranging between 21% and 88%). Projects are expected to last between 2.5 to 3 years on average. Details on each project can be found in the summary tables in Annex A.

The call was entitled 'Municipal-Supported Un-sewered Sanitation Improvements for the Urban-poor in sub-Saharan Africa'. Funded projects aim to implement and test different approaches to improve the sustainability of sanitation services along the complete value chain, including through testing alternative business models profitable and safe reuse approaches, as well as social, institutional, financial and technical innovations. They aim to improve the performance of public utilities and municipalities. Municipalities lead some of these projects (to here as "municipality-led" projects in the map above) whereas others are led by businesses (utilities or social enterprises) or by NGOs.

1.3.Objectives of the report

As part of its knowledge management and sharing activities, the AWF held a three-day workshop in Accra in February 2014 gathering current and prospective grantees. The objective of the workshop was to share experiences with a focus on innovative and promising aspects that can be replicated elsewhere. Technical, social and management aspects of the 14 projects currently funded or about to be funded were discussed, as well as experiences with sustainable sanitation services delivery from

other urban sanitation projects. Finally, the AWF/AfDB procurement rules and procedures, disbursement processes and financial management procedures were presented in order to support better project implementation.

The present report builds on the findings from this workshop. Its objective is to present the main topics and issues that AWF-funded urban sanitation projects are currently dealing with. The report presents the projects in the AWF portfolio and aims to characterise and compare the approaches and business models developed to deliver sanitation services and the strategies adopted to promote sustainability (demand creation, involvement of and/or support to existing SMEs along the value chain, access to finance and microcredit, development of a business approaches and capacity building of local governments). Most ongoing projects were approved in 2013 and are now at a stage of further defining the project design, preparing implementation and procuring contractors. As a result, this report focuses on project designs, as it is too soon to extract lessons for most of them.

1.4.Report structure

The report is structured as follows:

- **Section 2** provides an overview of the project portfolio (location, challenges addressed and activities funded along the sanitation value chain, approaches to improving urban sanitation, and other expected beneficial impacts);
- **Section 3** describes the strategies that projects have developed (or aim to develop) to improve the sustainability of sanitation service delivery. It provides examples of concrete solutions implemented by the AWF-funded projects, as well as experiences from other sanitation projects;
- **Section 4** draws out overall conclusions and identifies areas where further action-research and experimentation is needed.

Annex A contains a summary overview of urban sanitation projects funded by AWF and **Annex B** includes individual project fiches for each project. **Annex C** contains a list of useful references on the strategies in the report whilst **Annex D** contains the bibliography of sources used in this report.

2. Overview of the municipal un-sewered sanitation projects

This section provides an overview of the municipal un-sewered sanitation projects financed by AWF and the various activities funded along the sanitation value chain. It starts by identifying the main challenges the projects seek to address and compares the institutional arrangements adopted by these projects to develop sustainable services. It then identifies the additional benefits that the projects are expected to deliver. Profile sheets for each project are presented in Annex B.

2.1. What are the sanitation challenges addressed by the projects?

Due to increasing urbanisation, large quantities of FS are produced in sub-Sahara African cities with no means of safe disposal. The following challenges are commonly observed in sub-Saharan Africa:

- **Low demand for sanitation and collection of FS**: In some informal settlements, the population relies on shared facilities or resorts to opendefecation. This is due to limited awareness of health impacts, limited capacity to pay for improved sanitation solutions, the lack of affordable sanitation technologies or lack of space to install a latrine.
- **Unhygienic methods to empty and transport FS out of the settlements**: Current methods for emptying and transporting FS are mostly unsafe. Households rely on manual emptying or dump the sludge in the open, particularly when mechanical emptying services are too expensive or not available. Emptying trucks cannot access densely populated areas whereas smaller alternatives (such as gulpers or vacutugs) have mostly failed to scale-up so far.
- **Insufficient FS treatment:** Some of the cities are equipped with FS treatment plants but these are often not functional or do not have sufficient capacity to receive the volumes of FS produced in the city. This means that untreated sludge is either stored (releasing methane gases into the atmosphere) or discharged in the environment. In some cases, the recipient water bodies (including groundwater) are the water sources for the towns, resulting in higher treatment costs.
- **Limited reuse of FS**: Unquantified (but limited) quantities of untreated FS are sometimes used as fertiliser to grow vegetables in urban areas, which represents an important health hazard for producers and consumers. By contrast, the potential for reusing treated FS for agriculture or as energy source is largely unexploited.

To reduce water-borne diseases and child mortality and improve the livelihoods of the urban poor, it is essential to ensure access to, and use of, appropriate sanitation facilities that are hygienic and durable and ensure proper containment of the FS. The FS needs to be safely and economically transported and sanitised for reuse (or at least safe disposal).

Improving access to sanitation and Faecal Sludge Management (FSM) require strong planning and coordination along the life-cycle of service delivery, both in terms of investment and operations. Integrated planning calls for a stronger link between investment, capacity building and political commitment (at national and local levels).

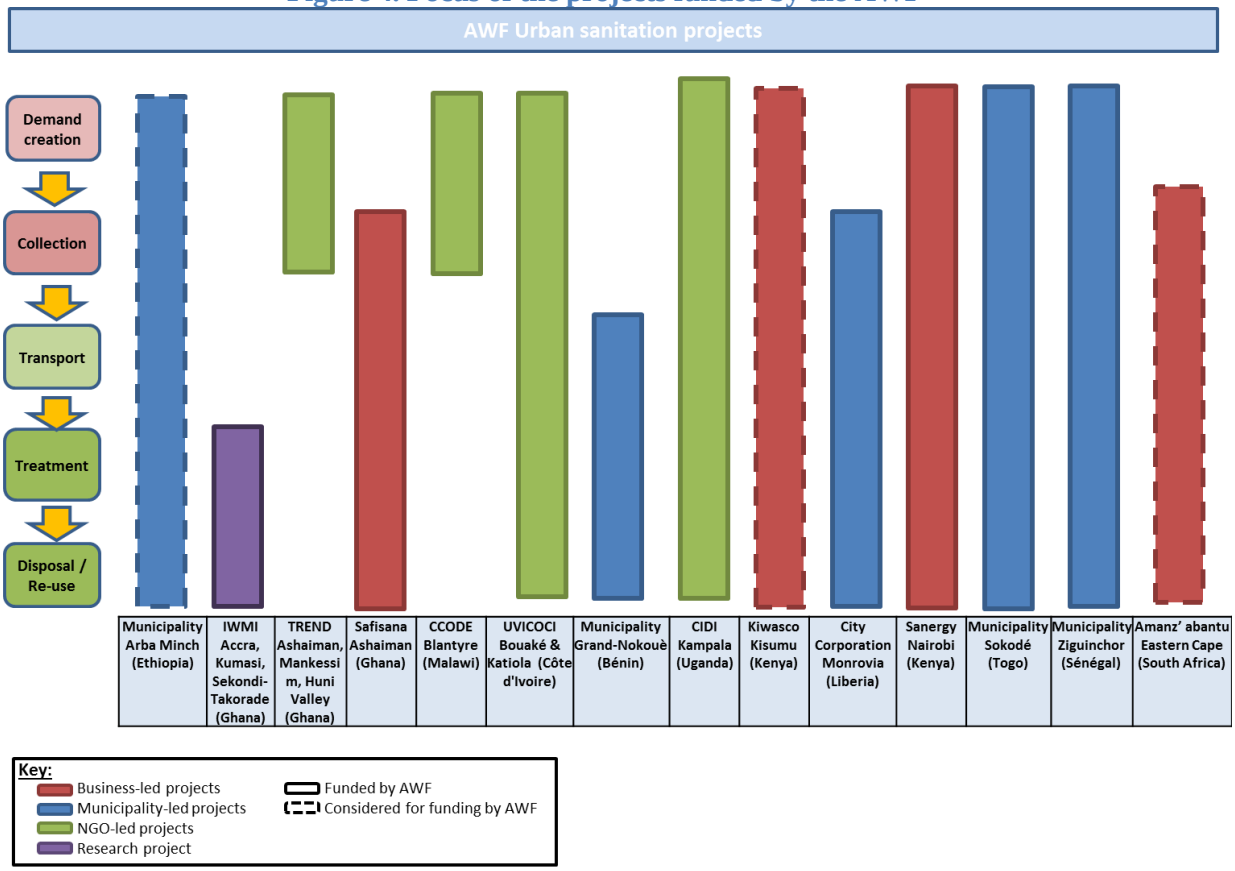
To address those challenges, AWF is funding projects that typically seek to apply an integrated and sustainable approach to Faecal Sludge Management (FSM) throughout the sanitation value chain, all the way to reuse. The AWF-funded projects are integrated in two senses:

- They bring together **a range of partners** in carrying out these activities. Projects typically include the municipality (which has delegated powers to manage sanitation services in the city), service providers (including formal companies as well as micro-enterprises) as well as other institutions carrying out activities related to sanitation (water supply, environment protection, health) and NGOs providing support for project implementation.
- They support **a set of activities** that are mutually supportive and co-ordinated to help improve the safe management of FS along the sanitation value chain and the cleanliness of the urban environment. Most projects cover activities such as demand creation, toilet construction, operation and maintenance of toilets, collection of FS and transport of FS to a treatment plant for

disposal or reuse after treatment. AWF funding usually seeks to target the weakest link of the sanitation value chain as identified in the particular location for each project.

Figure 2 below presents the different steps of the value chain funded by the projects and uses different colours depending on the main actor leading on the project.

Figure 4. Focus of the projects funded by the AWF



2.2. Institutional approaches to municipal un-sewered sanitation

All AWF-funded projects are supporting activities at the level of a given locality. These can vary in size, ranging from small secondary towns in Togo (Sokodé) to peri-urban areas in large towns such as Monrovia in Liberia or Kisumu in Kenya. The portfolio of projects illustrates a diversity of institutional approaches to ensure that municipal services are developed in a sustainable manner.

In the table below, those approaches are characterised according to the main actor leading the project, distinguishing between municipality-led, NGO-led and business-led approaches. Their main benefits are highlighted as well as their potential limitations.

Placing the municipality at the centre of the project can yield benefits in terms of sustainability, except where consultants recruited are largely managing the project from within the municipality, and as such no skills are transferred when the project is completed. The strategy of supporting businesses to lead on project development (such as in the case of Sanergy in Nairobi, Kenya or Safisana in Ashaiman, Ghana) can have higher chances of scaling-up if the business is dynamic and actively seeking to grow. But this also calls for strong cooperation with municipal authorities and coordination with the other service providers in the urban area to ensure sustainability and full coverage. Some projects, initially proposed by social enterprises, were not deemed to be eligible recipients at the time. Therefore, TREND (NGO), Athi Water Service Board and Eastern Cape Department of Education were made grant Recipients, while the proponents became Implementing Agency (SafiSana) or implementing partners (Amanz' abantu and Sanergy).

Table 1 - Overview of institutional approaches adopted by the projects

	Municipality-led	NGO-led	Business-led
Projects concerned	• Municipality, Arba Minch (Ethiopia) • Municipality, Grand-Nokoué (Bénin) • City corporation, Monrovia (Liberia) • Municipality, Sokodé (Togo) • Municipality, Ziguinchor (Sénégal)	• TREND (Ghana) • CCODE, Blantyre (Malawi) • UVICOCI, Bouaké & Katiola (Côte d'Ivoire) • CIDI, Kampala (Uganda)	• Safisana, Ashaiman (Ghana) • Kiwasco, Kisumu (Kenya) • Sanergy, Nairobi (Kenya) • Amanz' abantu, Eastern Cape province (South Africa)
Project objective	Support a municipality to develop pro-poor sanitation services through public-private partnerships	Support an NGO to facilitate the development of pro-poor sanitation services in partnership with the municipality and main service providers.	Support a private or public enterprise to develop a business model to collect, transport, treat and market FS by-products for reuse, in partnership with the municipality.
Grant Recipient and Executing Agency	Municipality, which often creates an ad-hoc project management unit, working with a consultant.	NGO	An enterprise is the executing agency, but the grant is received by a public organisation or an NGO to facilitate AWF funding.
Implementing partners	NGOs, universities, private enterprises.	The municipality, and public water and sanitation utility	The municipality, NGOs and public water and sanitation utility
Strengths of the approach	• Strengthens the capacity of the municipality in a sustainable manner to coordinate and organise sanitation service provision. • Facilitates the set-up of consistent regulatory arrangements for collection in the transport of FS. • Allows leveraging other sources of municipal funding (public budget/ sanitation tax etc.) to cover the financing gap.	• Allows capacity building and training of local actors as service providers (for the demand creation, collection and transport of FS) or as coordinator (municipality, main utilities).	• Brings business and technical expertise. • Can play a catalytic role in defining and establishing market opportunities. • Vertical integration can increase the sustainability of sanitation services and FSM. • Allows generating additional revenues from reuse that can be directly used to subsidise collection and transport, and improve the sustainability of the service provision.
Potential limitations	• Weak capacity at municipality level can weaken implementation. There is a risk of low sustainability when consultants manage the project rather than municipality staff.	• There is a risk of low sustainability if the municipality or the main utility is not strongly involved to plan and coordinate service provision. There needs to be a clear exit strategy for the NGO.	• Weak partnership with the municipality/ policy-making entity in some projects can limit the sustainability and scaling up of the business approach.

2.3. Expected additional benefits from the AWF-funded projects

AWF-funded projects also address cross-cutting social and environmental issues. These can be summarised in three main categories: job creation, green growth and gender mainstreaming.

Job creation. Most projects aim to create jobs and thus skills in target communities. They aim to strengthen the delivery of services at each step of the sanitation value chain by setting up or working with existing artisans, Community-Based Enterprises (CBEs) or SMEs conducting sanitation promotion, constructing and operating toilets, emptying latrines, etc. The construction of FSTPs and processing facilities to produce FS reuse by-products will also create jobs. This will have a positive impact on the economy of the town. This will also reinforce the sector capacity at the level of municipalities (for project and public services management) but also for all the other private actors involved and this will create new opportunities for development.

Green Growth. The collection and treatment of FS will reduce ground and water pollution. It will also reduce methane emissions from accumulated and untreated faecal sludge. Faecal waste generated in latrines will be safely contained, collected and transported to a FSTP. Regarding FS reuse, the majority of projects (9 projects out of 14) are exploring the possibilities of producing reuse FS by-products such as organic fertilisers for agriculture or biogas to generate energy. Three entities funded by AWF have already started producing reuse products, although they are still at an experimental stage (IWMI/WRC, Safisana in Ghana and Sanergy in Nairobi). Two projects are considering promoting Ecologic Sanitation. Reuse of FS fertiliser will help reduce the use of artificial fertilisers, contributing to reducing (indirect) CO_2 emissions.

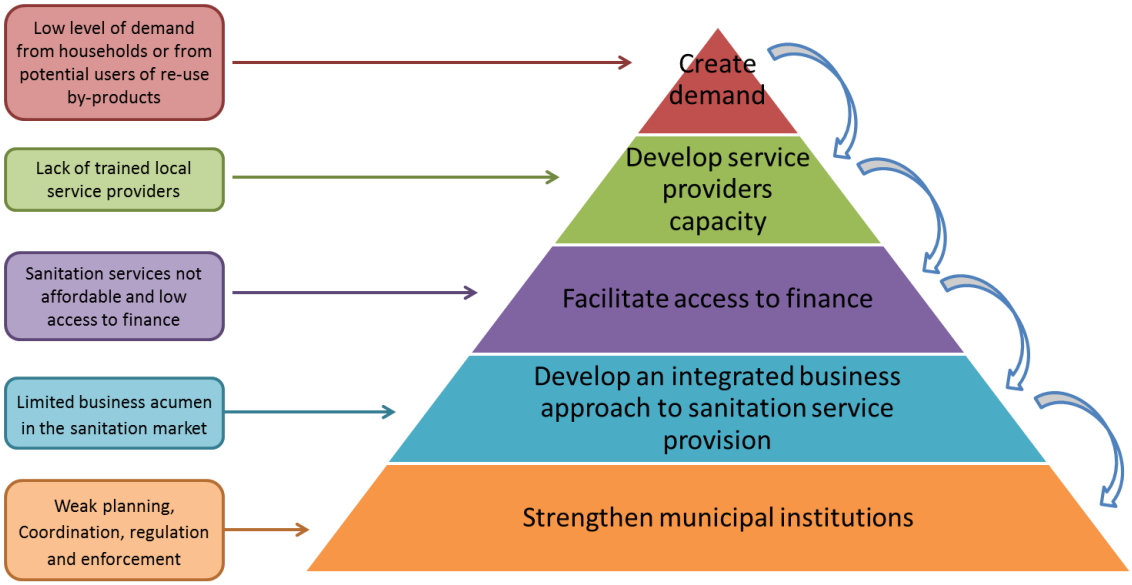
Gender mainstreaming. Many projects have set targets for employing women and youth in the new jobs that are to be created by the projects, as well as for women's participation in the projects' steering and users committees. The projects that will build public or shared toilets also aim to design gender-segregated facilities that are tailored for the special needs of women and children.

3. Strategies to promote sustainability

Urban sanitation services commonly face a number of challenges that limit their sustainability, including low demand from households or from potential users of reuse by-products, lack of qualified local service providers, high costs of services for users and the absence of sustainable financing for the value chain, limited business acumen in sanitation markets, and weak coordination, planning, regulatory and enforcement capacities at the level of municipalities. To tackle these issues, the AWF-funded projects are implementing and testing various strategies that aim to strengthen the sustainability of sanitation service provision. This section reviews how the AWF-funded projects have incorporated strategies to address these constraints into their design to promote sustainability. Most of its 14 urban sanitation projects are only at the beginning of implementation (11 projects), or still in preparation phase (3 projects), therefore their design is likely to evolve. This section presents project design as of April 2014.

The figure below presents five main strategies, also referred to as "building blocks". The main point of entry for any project is usually to create demand (the tip of the triangle below), but other strategies allow providing a stronger basis for sustainability. The foundations of a sustainable approach are to strenghten municipal institutions so that they can provide a favourable environment for all of these activities to be delivered on an ongoing basis. This is also where most challenges lie, as municipal capacity and policies are influenced by other factors beyond the sphere of sanitation.

Figure 5. Building blocks to promote sustainability in municipal sanitation services



Most urban sanitation projects in the AWF project portfolio have included in their design some or most of these strategies to enhance their sustainability:

- **Create demand**: 11 projects out of 14 include demand creation strategies. Most of them went beyond simple Information, Education and Communication (IEC) campaigns and introduced sanitation marketing strategies, multi-media communication campaigns and working with CBOs to promote sanitation.
- **Develop service providers' capacity**: All 14 projects are training service providers, for a range of activities from demand creation to reuse. Some projects are setting up and training SMEs, while others are working with established operators. Four projects are actively engaging with SMEs through a franchise model, including Safisana (Ashaiman-Ghana), Sanergy (Nairobi-Kenya), Amanz' abantu (Eastern Cape-South Africa), Kiwasco (Kisumu-Kenya). Three other projects are involved more specifically in the professionalisation, organisation and licencing of

mechanical emptiers (Municipalities of Grand Nokoué, Monrovia and Ziguinchor as well as Kiwasco (Kisumu)).

- **Facilitate access to finance:** 10 projects include the provision of microcredit mechanisms. Six projects include microloans to households to help them spread the costs of building sanitation facilities, whilst four projects include financial support to sanitation SMEs, either directly through micro-loans or through leasing trucks. Most projects are using or intend to use a Revolving Fund and working with MFIs or saving groups. Among the 10 projects, two intend to provide financing solutions indirectly: one project through a partnership with an on-line lending platform (Sanergy, Nairobi) and the other one through a partnership with a sanitation microfinance project (Municipality of Arba Minch).
- **Develop an integrated business approach to sanitation service provision:** 4 projects out of 14 are led by private businesses (social enterprises or utilities) which have integrated several steps of the value chain, from demand creation to reuse (Safisana, Sanergy, Amanz' abantu, Kiwasco). Businesses involved in treatment and reuse have inherent incentives to secure supply of FS and thus extend their services to demand creation, collection and transport. Coordination under the leader of one business can improve the financial viability of sanitation services and therefore their sustainability.
- **Strengthen municipal institutions:** Municipalities lead 5 projects (i.e. where the municipality is both Grant Recipient and Executing Agency or at least holds a planning and decision-making function). Only 8 projects include capacity building for the municipality (4 of the municipality-led projects (with the exception of Grand Nokoué), 3 NGO-led projects (TREND (Ghana), CIDI (Kampala), UVICOCI (Bouaké & Katiola)) and one business-led (Amanz' abantu). The TREND project in particular has set up an interesting approach to actively include pilot municipalities in this NGO-led project and build their capacity (although it has only been semi-successful so far).

As can be seen in Table A.2. in Annex A, none of the projects are deploying all strategies. Eight projects are deploying 4 of the 5 strategies, and two projects are only implementing one strategy (Municipality of Grand Nokoué and IWMI (Ghana), which is a research project). It is too early to state whether those strategies will in effect foster sustainability, however, as many of these projects are yet to be implemented and in some cases, these strategies may be inadequately implemented and not deliver sustainable outcomes. Future evaluations of these projects will need to test the effectiveness of these strategies and their impact on sustainability.

3.1. Create demand

Challenges faced

Creating demand is needed at two levels. On the one hand, poorer households do not tend to see sanitation as a priority service. This may be due to a lack of hygiene awareness, affordability constraints or the fact that poor households do not "aspire" to sanitation in the same way as they would aspire to own a mobile phone. On the other hand, demand for FS by-products, such as biogas or fertiliser, is also low. In some countries (Ghana for instance), farmers seem to be reluctant to use FS as a fertiliser for fear that their customers would stop buying their products if they become aware that FS has been used in the production process. Consumers are also not aware that they can use biogas as a combustible or a source of electricity.

What needs to be done?

Projects need to deploy strategies to create and support demand for both sanitation services and reuse by-products. Three types of demand creation strategies can be deployed:

- Creation of awareness for sanitation and hygiene behaviour (in particular hand-washing with soap) or for FS by-products;
- Developing and marketing specific products and services that respond to the specificities of demand in the project target areas. These include (i) household facilities with real and perceived value for money (in terms of prestige, comfort, safety and savings on health costs); (ii) emptying services for household, community and public facilities; (iii) safe reuse (or disposal) of FS

including adequate treatment adapted to generate marketable products. This strategy is often referred to as "Sanitation Marketing".

- Encouraging demand through "carrot and stick" measures (support financing of sanitation products and enforcing regulations). Implementing this latter strategy successfully calls for strengthening municipal institutions, as discussed in Section 3.5.

This section focuses on sanitation marketing approaches, which are the most innovative ones and most likely to strengthen sustainability. Sanitation marketing should be based on a sound understanding of the audience or potential customers, including their current level of demand for sanitation or reuse products and services, their current level of hygiene awareness and practices as well as of the environmental, social, cultural, regulatory and financial requirements.

Demand creation strategies need to be tailored to the local context, so as to adapt to local demand and economic and socio-cultural conditions. The core objective is that users perceive the value for money of the products or services so that they would be willing to pay for them.

Sanitation marketing strategies usually take four main dimensions into account: the product, its price, its sales place and its promotion methods. These four elements, which are commonly referred to as the "Marketing Mix" or the "4Ps", provide a framework to determine a product or brand's offer, as follows:

- **Product**: What is the product/service that will best satisfy identified customers' needs?
- **Price**: How much will customers be willing and able to pay for the product or service?
- **Place**: Where and how will customers access or buy the product or service? What are the distribution channels? How will the sanitation product be installed?
- **Promotion**: Where and when will customers learn about the product or service? This includes different communications channels such as advertising, public relations and personal sales.

The figure below shows the more detailed questions that need to be addressed to determine the four elements of a sanitation marketing strategy.

Figure 6. The Marketing Mix or "4Ps"

How do the AWF-funded projects create demand?

Even though AWF-funded projects do not refer to the "sanitation marketing" mix as such, they do define some of the 4Ps in their design (partially or fully) so as to market sanitation facilities and services to poor people. In most cases, such an approach still needs to be deployed to support demand for reuse products, although several projects have included research on target markets. Projects also insufficiently look at marketing emptying services, which is likely to be an issue limiting the viability of emptying businesses.

This section presents different options that have been considered by AWF-funded projects to determine their sanitation marketing strategy, following the 4Ps.

Design a demand-responsive product or service. Projects are designed to develop innovative sanitation products and services to respond to the specificities of demand in different areas and socio-economic contexts. They aim at designing products and services that provide obvious benefits to users. This is essential to ensure that they meet users' demand and desire and will thus continue to be sold after the projects end if users are buying them. AWF-funded projects are designed to develop and sell products such as household sanitation facilities, public sanitation facilities, as well as end use products derived from treated dried FS (fertiliser or energy). In terms of services, these are mainly access to clean public sanitation facilities, emptying and maintenance of private and institutional latrines, and selling FS products.

Some projects have developed innovative products to answer the challenge of accessibility of latrines for emptying in densely populated areas, as set out below:

- Sanergy (Nairobi) developed the "Fresh Life" toilet: a public or private toilet facility for slums that is emptied daily. Newer developments also include household facilities and upgraded pit latrines;
- Kiwasco (Kisumu) would like to promote in their planned project the use of a household pit latrine equipped with a bag installed inside the pit to facilitate emptying (on the model of the Xipoti pit latrine developed in Mozambique);
- CCODE (Blantyre) promoted the "SKYLOO" ecosan latrine. These are designed to store and compost human faeces to produce a safe soil enhancer for use or sale. CCODE's design is an above-ground, twin vault, urine diverting toilet with an attached bathroom;
- BioFilCom (which is not AWF-funded) is selling to poor households living in slums in Accra innovative low-flush latrines ("BioFil") equipped with filters replacing the traditional septic tank. This eliminates emptying costs.

These projects put forward two effective product-marketing strategies, including standardisation for a uniform product and development of a brand to enable quick recognition and encourage uptake. It is too early to tell whether or not the products developed through the projects will effectively meet demand: this will be evaluated in subsequent stages.

Set the right price. The price of products or services has an important impact on the uptake and sustainable offer of sanitation services after the project completion. Products need to be affordable and attractive to users. On the other end, the price also needs to be high enough to ensure that sanitation services are profitable over the long term. If prices are unaffordable for poor users, some projects have developed strategies to spread payments over time thanks to micro-loans that allow paying for the product upfront and reimbursing it periodically. This has been done so far only for household facilities. Innovative payments schemes could also be explored for mechanical emptying services for instance. Completed or ongoing projects funded by AWF have sought to set prices at a level that responds to demand, particularly by combining price setting with other support strategies.

For example, in Blantyre, although the initial cost of an Ecosan latrine was higher than alternatives (MWK 83,000 or EUR 250 in 2012, i.e. approximately 33% more than an improved pit latrine and slightly more than 3 times the cost of a simple pit latrine), total costs are lower over 20 years, as the facility does not need to be replaced every 3 to 6 years as the others types of facilities. If the faecal waste compost is sold, there is a small net surplus after 15 years. To make the Ecosan latrine affordable and more attractive than a simple pit latrine, CCODE therefore proposed a microloan to households to enable them spread investment costs (See section 3.1). However, it is too early to tell whether this strategy has been successful or not.

In Nairobi, Sanergy has conducted a market analysis to study the competition. The Fresh life toilet is sold at USD 550 per unit, or USD 8 per user (based on 70 users per day). By comparison, other

systems are much more expensive for a worse service. Other NGO-run "bio-centers" cost USD 50 per user (based on 500 users per day) whereas the user charge is similar (USD 0.04-0.06 per usage). In terms of emptying, a one-year subscription for daily emptying is included in the starter package. Renewal for an additional year currently costs approximately USD 100. However, this is not fully cost recovering and needs to be cross-subsidised with revenue from FS by-products (which are currently being tested). If not enough revenue is generated from selling FS by-products, this low price could be a financial risk for the business as a whole.

Typical challenges would include competition from other projects that receive subsidies, as noted by the Municipality of Sokodé in Togo, which highlights in its Appraisal document the fact that another NGO in the municipality is subsidising latrines, thereby undermining the proposed efforts to create a business-led sanitation market.

Many of the new projects propose to implement a micro-finance component to facilitate households' access to latrines (see Section 3.3 for a more in-depth discussion on the role that microfinance can play). For instance, BiofilCom (a non-AWF project) partnered in Ashaiman with a local NGO that pre-financed the latrines for households. This scheme was successful but needs to be scaled up and developed into a more commercialised approach, as discussed in Box 1 below.

Box 1 - Biofil- Selling ecologic latrines to poor households in partnership with a local NGO

BiofilCom has developed the Biofil Toilet System, which uses aerobic digestion to decompose faecal waste. The digester can be connected to water closet toilets in homes, schools, and offices. In dense urban areas where water lines are not available, a micro-flush toilet bowl can also be connected to the digester. This simple technology uses a small digester box measuring two by six feet. It has a series of filter media, including a filtering concrete that allows rapid separation of solids from liquids. This filters the faecal matter that is flushed with 0.5 L of water. The wastewater then sips into the soil as normal water, while earthworms and other organisms feed on the excreta or retained solid At the end of 2013, over 4,000 households and institutions had bought a Biofil digester, which was first piloted in 2005 and launched in 2008. The digester costs USD 600 and the full latrine with the digester, the toilet seat and the superstructure costs USD 1,000. A household of 10 can use the latrine with a standard digester.

The Biofil system is mainly sold to middle income households (due to its relatively high price) but it would also be suited to poor urban households living in slums, as it requires no emptying and is odourless. In January 2014, BiofilCom received a grant of one million US Dollars from the Bill and Melinda Gates Foundation to make its toilets available at a cheaper price, using low cost material. Experimentation is still ongoing to bring the price down and make it more affordable to low-income users.

To overcome the issue of affordability for poor households, BiofilCom also developed a micro-payment scheme with the support of a local NGO in Ashaiman. The NGO pre-finances the full-cost of the latrine upfront to BiofilCom and households pay a monthly payment to the NGO equivalent to the amount they would pay for using public facilities. Households pay back the principal in one to two years, and the NGO charges an interest rate that varies with the length of the loan (10% for one year and 20% for two years of lending). Through this scheme, they have installed 65 Biofil systems in the slum. Even though the interest rate charged is quite high, the savings for households on public facilities user fees is considerable as the Biofil toilet can be used for many years at a low O&M cost.

Identify a place to sell the product or service. Projects aim to set up selling places that will be known by users and continue operation after the end of the projects. Users need to know where to find a latrine vendor or artisan, a public latrine or reuse fertiliser. However, this strategy needs to be well thought through to be successful.

In Ghana, the TPP project has constructed "SaniMarts" in two pilot towns to serve as a one-stop location displaying all the viable latrine technologies to help potential beneficiaries choose their facilities. In Mankessim, 8 facilities are presented on site, including VIPs, KVIPs, Mozambique slabs, pour flush toilets, water closets, and the innovative Biofil latrines. The toilets include 8 different designs of subsurface structure and various options for superstructure construction. However, the SaniMarts have not been managed as a promotional tool in a structured way and thus their impact so far has been low. This has contributed to low demand for affordable latrines. In Huni Valley only

12 facilities have been built by trained artisans on demand of households. Therefore more efforts at sanitation marketing are required to generate demand.

For marketing reuse by-products, three projects have included setting up demonstration farms, to showcase the agricultural value addition of FS and urine products for specific crops at selected locations (FISH in Morovia, Sanergy in Nairobi and Kiwasco in Kisumu).

Promote the product or service. Promotion is the most innovative element of the 4Ps for sanitation markets. Traditionally behaviour change has been triggered through IEC for community mobilisation and hygiene promotion. This is essential to promote sanitation, but insufficient to trigger the purchase of a latrine or using a public facility (or reuse products).

On the other hand, marketing practices focus on promoting a specific product or service to trigger purchase, using different methods. Successful consumer retail companies (such as Coca-Cola or Safaricom) demonstrate how marketing can be a powerful tool to communicate the value of a product or service to customers and trigger purchase. They use different communication channels such as branding and advertising, personal sales and promotion that are stronger triggers for behavioural changes.

The Sanergy project is a good example of smart use of aspirational marketing promotion techniques for sanitation. Aspirational marketing strategies are designed to change or reinforce customers' emotional perceptions of a product through a brand. Concerning sanitation for instance, this means that the brand developed to promote the use of sanitation facilities not only conveys a message of public hygiene and functional use, but also a social aspiration for a better and cleaner lifestyle. Sanergy combines IEC with the promotion of a toilet brand ("Fresh Life") that creates an aspiration and generates positive emotional reactions in users' mind. To do so, it uses similar techniques as McDonald's does for instance, through a multi-channel promotion campaign as presented in Box 2 below.

Box 2 – Sanergy: aspirational marketing through branding

Sanergy aims to improve access to sanitation in slums through the franchised management of shared sanitation facilities, and provision of collection, treatment and reuse services. Sanergy developed a franchise model for operation of public facilities by micro-entrepreneurs. Franchisees purchase a "Business in a box" from Sanergy to operate a "Fresh Life" toilet (including a toilet, cleaning material, marketing material, business training) and pay for daily emptying. Sanergy provides daily emptying services and transports the FS to their treatment plant where they produce and sell reuse products, including organic fertiliser, bio char, urine fertiliser, and biogas.

Developing a brand. To convey a powerful message of social change, Sanergy designed a brand with a logo and an ethos that would encourage entrepreneurs to buy latrines and prompt residents to pay for hygienic sanitation. "Fresh Life" was chosen for its aspirational tone, the reference to cleanliness, and its permanent power, i.e. implying that it provides a lifetime of cleanliness, rather than just a moment. The logo, a sun rising over green fields on a blue background also conveys a message of powerful social change. The blue colour was chosen to differentiate them for market competition in the slums (Coca-Cola is red, Safaricom is green).

Promoting the brand and the aspiration for cleanliness. The brand is promoted in two ways. First, Sanergy conducts activities to trigger behaviour change of residents living within the reach of each toilet installed. The operator of an installed toilet is provided with information, education and communication (IEC) materials and assisted to implement a customised marketing campaign that is adapted to the specific circumstances of the households within 100 m of the installed toilet in order to generate interest in the facilities as well as the use of the toilet facility. Active campaigning is done through local shops. The Fresh Life logo is painted on walls in the

communities where they work. The team also promotes and celebrates Fresh Life by organising Fresh Life Toilet opening ceremonies, football tournaments, and edutainment activities for community youth. A Fresh Life Song has also been composed and is played on local radios. The promotion of the brand and its ultra-presence inside the communities aims to convey three messages:

- Consistency: As for McDonald's, the experience of using a Fresh Life toilet will be the same in all locations (a friendly operator, available toilet paper, a clean facility, and water for hand washing);
- Accessibility and proximity: As for Safaricom kiosks, everyone should be able to find a Fresh Life toilet less than 500 yards away from their house.

Promotion can be a very powerful tool to create sustainable behaviour change from users, by associating sanitation not only with a product but also with a social aspiration.

New projects funded by the AWF mention marketing and promotion of sanitation, but most often in a vague manner, and are not directly focused on products. For example, The Arba Minch project proposes to set up awareness creation activities through a "Life-time campaign", an integrated information and education campaign using various communication canals (TV, radio, road shows, media material, educational material, etc.). In the same way, the CIDI KUPSIP project (Kampala) proposes a combination of an IEC campaign, using diverse communication materials, and close and regular contacts between the communities and CIDI to create sustained demand for sanitation.

The notable exception is the Kiwasco (Kisumu) project, which proposes to set up IEC interventions in schools and directly targeting residents, as well as focused promotion campaigns for promoting certain options of sanitation facilities.

For all these projects, linking these campaigns to one or several specific model or brand of latrines that artisans would be trained to build could improve the sustainability of the behavioural change sought. The Kiwasco project in comparison to the Arba Minch and CIDI ones, may have greater chances of success (i.e. achieving sustainability), as the marketing campaign would be directly undertaken (or sub-contracted) by the company selling the sanitation products (which is also the main utility). Therefore, it has a direct incentive and the financial means to continue promotion in the future. On the contrary, the two other projects present the sanitation marketing component as an activity that will be undertaken by the NGO or the municipality, two actors that could exit the market or prioritise other activities. Other projects aim to set up CBEs, Sanitation Committees or women groups to promote and sell the sanitation products (Bouaké and Katiola, Sokodé, Ziguinchor, Kampala, Kisumu). Adequate support, including branding and sales techniques would need to be provided by the support organisations (NGO, utility municipality) to ensure they undertake dynamic promotion.

Regarding reuse products, among the 9 projects that include FS reuse activities, the 2 more "mature" ones include activities to promote reuse by-products:

- Sanergy (Nairobi) is proposing to develop with AWF funding a similar strategy for reuse products as the one it has developed for the actual toilets, by developing a brand for FS fertiliser that will promote the safety of reuse.
- The Safisana project has included a component of marketing of reuse products, in which their partner TREND will prepare communication materials and multi-media products to market products to end-users. They also have built inter-sectoral collaboration between SSGL, the relevant government actors (Sanitation, Energy, and Agriculture) and the Ashaiman Municipal Assembly (ASHMA) to deploy common efforts to improve the acceptability of reuse products which is deemed to be low in Ghana.

Regarding the 6 other more recent projects, all of them include promotion and marketing of reuse by-products in their PAD, but without further specifications. The Kiwasco (Kisumu) project distinguishes itself as it proposes to outsource marketing and sales to a private company in a PPP contract agreement and to set up FS User Association with small and large scale farmers and horticulturists to

control the quality of products. These groups could also support a strategy to develop a core basis of loyal customers that would promote reuse by-products to their peers.

3.2.Develop service providers capacity and skills

Challenges faced

In small and medium towns of sub-Saharan Africa, supply of sanitation services is not adequate to respond to growing demand. Sanitation service provision is lacking in some segments of the value chain, such as demand creation, micro-credit supply, mechanical emptying, etc. Entrepreneurs need to be incentivised to enter this market. Moreover, sanitation service providers are often small enterprises that lack business and management skills. They operate with second-hand equipment, which limits the performance of their activities. In addition, the cost of acquiring spare parts and equipment is usually high because services are fragmented.

What needs to be done?

There are many opportunities for fostering business development and creating jobs in the sanitation sector. The provision of services also needs to be professionalised so as to improve the level of service and the performance of service providers along the value chain. The following strategies can be deployed as part of project design to reach this goal:

- Provide training and equipment to existing service providers, particularly with the aim of upgrading informal providers;
- Identify opportunities for market development and support micro and small entrepreneurs to enter the market to provide services for urban poor.
- Build capacities and create jobs in the communities that will be retained to ensure sustainable service provision.

How do the AWF-funded projects strengthen local service providers?

The figure below shows at which steps of the value chain AWF projects are fostering the development of small-scale service providers' skills. As shown through the bars on the figure below, upgrading skills is mostly focused on the demand creation, collection and transport segments of the value chain rather than further below.

Figure 7. Involvement of AWF funded projects on sanitation to develop small scale service providers' skills

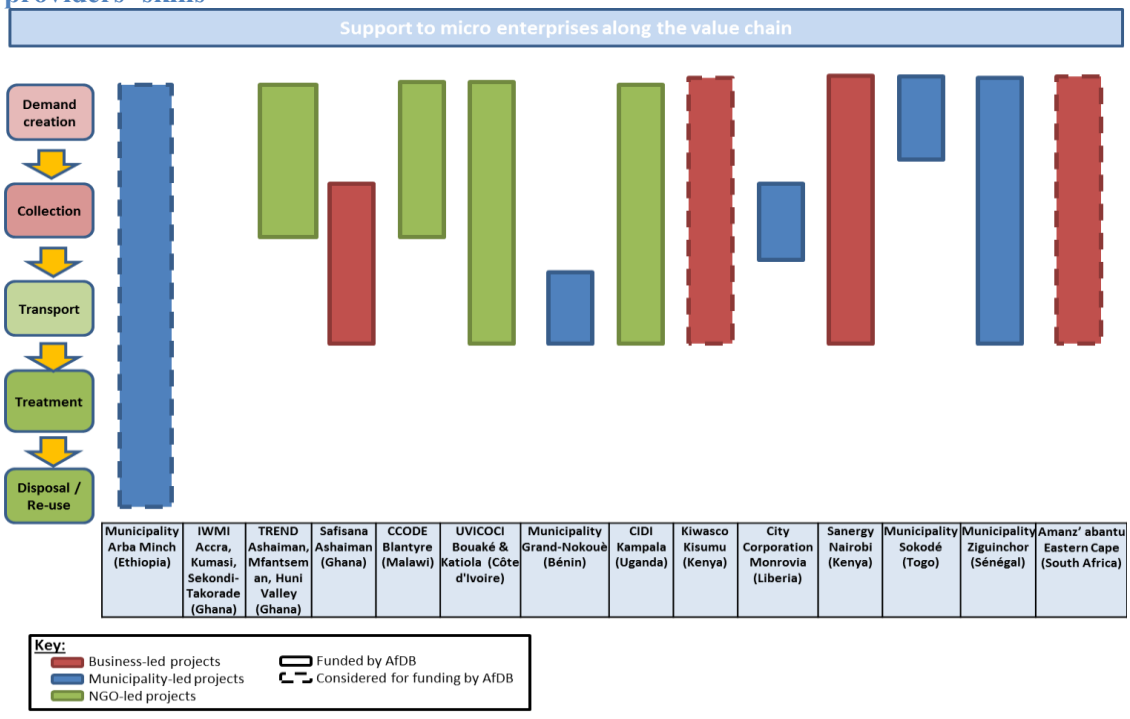


Table 2 below shows the roles that micro and small entrepreneurs play at different levels of the sanitation value chain in projects funded by AWF. The most frequent types of roles are: 1) to mobilise communities, sell latrines and provide microfinance, 2) to construct latrines, 3) to operate public latrines and 4) to empty latrines and transport FS.

Table 2 - Roles for micro and small enterprises along the sanitation chain

Steps of the value chain	Role for micro and small entrepreneurs	Example of projects
Demand creation	• Hygiene promotion • Marketing/selling sanitation facilities	• Sanergy (Nairobi) • CCODE (Blantyre) • Arba Minch Municipality • UVICOCI (Bouaké & Katiola) • Sokodé Municipality • Ziguinchor Municipality
Collection	• Manufacturing/installation of sanitation facilities (by artisans)	• Arba Minch Municipality • CCODE (Blantyre) • UVICOCI (Bouaké & Katiola) • CIDI (Kampala) • Sokodé Municipality • Ziguinchor Municipality
	• Operation of public sanitation facilities	• Safisana (Ashaiman) • Sanergy (Nairobi) • MCC (Monrovia)
	• Cleaning and maintenance of public or shared sanitation facilities	• Amanz' abantu (Eastern Cape Coast)
Emptying and Transport	• Solid waste collection	• Safisana (Ashaiman)
	• Sanitation facilities emptying (manual and mechanical • Transport of FS	• Safisana (Ashaiman) • UVICOCI (Bouaké & Katiola) • Grand-Nokoué Municipality (Bénin) • CIDI (Kampala) • Kiwasco (Kisumu) • MCC (Monrovia) • Sokodé Municipality • Ziguinchor Municipality
Treatment	• Operation of composting facilities run by micro-enterprise to serve collectors equipped with donkey carts	• Arba Minch Municipality
Reuse / Disposal	• Selling reuse products to local farmers/ energy users	• Sanergy (Nairobi) • UVICOCI (Bouaké & Katiola)

In many projects, neighbourhood committees or volunteers conduct demand creation activities. In Malawi, for example, CCODE hired a volunteer team in the community that is involved in the entire project cycle to carry out community mobilisation, hygiene training, Ecosan acceptance and the repayments of loans. Group membership is similar to that of a cooperative. This measure can be effective to involve the communities in their own sanitation improvements but raises a question about the sustainability of these activities, as they remain dependent on individuals. Other measures could be introduced to incentivise the committees to perform their role by creating a business for them. The project run by Sokodé municipality in Togo, for example, seeks to transform neighbourhood committees into established CBOs or SMEs that could manage the micro-funds or sell latrines.

In order to enhance service provision, several projects (Arba Minch, Monrovia, Sokodé, Ziguinchor, Kampala, Bouaké & Katiola, Grand-Nokoué municipalities) are funding external trainers such as consultants, NGOs and universities to train services provider and provide them with business skills (through business skill training, on-the-job support, etc.). This can also be done through peer-to-peer

learning. For instance, in the CCODE project in Malawi, builders were recruited to train other builders in the community on-the-job to construct and maintain the water and sanitation facilities.

In other projects, a service provider involved in the project conducts training activities. Under a franchise model, Sanergy employs and trains young people in the community to market latrines, operate the latrines and empty them. Amanz' abantu also employs and trains cleaners and emptiers. In Kampala and Kisumu, the utilities (respectively NWSC and KIWASCO) are involved in the AWF-funded projects to provide training and equipment to private cesspool emptiers. In Ghana, Safisana is hiring and training operators to manage public latrines and pit latrine emptiers to supply FS to their treatment and reuse plant. This strategy enables internalising training costs at the level of the business in charge, which means that training can be funded on an ongoing basis from revenues generated by the business beyond the end of the project.

Further evaluation will be required to evaluate what the best way to train entrepreneurs is, and whether training activities undertaken by the AWF-funded projects have been successful at creating and retaining capacity in the target municipalities. Moreover, it will be necessary to evaluate whether training entrepreneurs alone is sufficient or whether this needs to be associated with the provision of seed-funding to acquire equipment, so as to enable them to maintain and grow their business.

3.3. Facilitate access to finance

Challenges faced

Investment costs represent a barrier for the growth of both the demand and supply sides of the sanitation markets. On the demand side, households have to make a significant initial investment to acquire an improved latrine, which can represent up to 80 or 100% of their yearly income. Moreover, as a high proportion of properties are rented, a key issue is that neither landlords nor tenants have an incentive (or an obligation) to invest in sanitation facilities.

On the supply side, entrepreneurs lack sufficient cash flow to invest in good quality equipment such as emptying trucks, protection equipment, etc. Commercial financial institutions are reluctant to provide financing without guarantees, which means that sanitation entrepreneurs have difficulties in acquiring the necessary equipment to start a business, obtain working capital or make necessary investments.

What needs to be done?

Setting up schemes to provide access to finance for households and sanitation service providers can support the development of the sector over the long term. Strategies can be developed to link either households or SMEs with financial institutions or other types of organisations that can help them meet their financing needs over the long-term in a responsive manner.

Different types of solutions can be envisaged, such as organising savings groups, setting up revolving funds that provide micro-loans or working directly with MFIs so as to increase their awareness of the financial needs and of the solvability of the sanitation sector. To that end, partner organisations that can potentially help finance sanitation actors need to be identified and sensitised. Working with established financial institutions can help with providing sustainable flows of finance, rather than isolated initiatives through NGOs that have limited experience with issuing and managing loans.

How do the AWF-funded projects facilitate access to finance?

Many AWF-funded projects aim to set up microfinance funds for households and SMEs, but most of them have yet to define how this component of the project will work. They have adopted different types of strategies, as set out below.

1. **Provide microcredit to households and sanitation entrepreneurs**

Two completed projects (CCODE (Blantyre) and TREND (Ghana)) have provided micro-loans to households to buy latrines through local revolving funds, with mixed results.

CCODE in Malawi channelled funds through their existing revolving fund, the Mchenga Fund, established since 2003 to provide housing loans to low-income earners all over Malawi. The fund is administered by CCODE and provides loans to groups of 10 members. As part of the overall project, AWF injected EUR 396,218 into the Mchenga Fund. As of March 2014, 581 toilets had been built, out of a (revised) target of 1,000. Although a second generation of loans has been launched, the Fund seems to be facing challenges because of low repayments and increases in the cost of Ecosan latrines (See box 3 below).

Box 3 – A revolving fund to finance Ecosan toilets: the Mchenga fund in Blantyre

The Malawi Homeless People's Federation (MHPF), a membership organisation running saving schemes, and the Centre for Community Organisation & Development (CCODE) established the Mchenga fund in 2003 to provide housing loans to low-income earners all over Malawi. Administered by CCODE, Mchenga operates as a revolving fund and provides loans to groups of 10 members. Group members act as mutual guarantees, thereby reducing the need for collateral. MHPF has over 15,000 members in both urban and rural areas, who originally contributed MK20 per month (EUR 0.037) to the fund.

In 2008, CCODE approached the AWF for support in constructing sanitation (and water supply) facilities within a wider new housing development project in Machinjiri (on the outskirts of Blantyre) in collaboration with Blantyre City Assembly (the municipality) and Blantyre Water Board (the city's utility). CCODE was proposing to facilitate the construction and installation of Ecosan toilets in 500 new homes though the provision of loans via the Mchenga Fund. CCODE also proposed to extend the scheme to 500 existing homes in low-income areas of Blantyre. In 2009, the AWF agreed to inject Euros 396,218 into the Mchenga fund, with the rest of the overall Euros 610,000 investment package supporting CCODE with community mobilisation and training activities (Euros 94,042) and overall project management (Euros 75,287).

Ecosan toilets turn human faeces into fertiliser, which can be used or sold as soil Their initial cost (currently about MK 83,000 or Euros 250) is 33% higher than the costs of an improved pit latrine. In the long run, the technology is cheaper than other alternatives because it does not need replacing or emptying if properly used. The Mchenga Fund allows selected beneficiaries to borrow up to 90% of the total cost of installing Ecosan toilets, the other 10% being funded by the borrower to acquire local material such as sand and bricks. The remaining necessary material to build the toilet is procured and delivered by MHPF. Loans are provided for a 24-month period, at an interest rate of 1% per month on a declining balance for first-generation loans. Interest rates were likely to increase to 2% per month for second-generation loans due to economic shocks and devaluation. As of March 2014, 581 toilets were built, all in existing homes in low-income areas. As no home had been completed in Machinjiri, there were no toilets installed in the new development. The update in August 2012 indicated that the fund was facing difficulties as repayment rates were relatively low.

TREND also set up a revolving fund in Mankessim to finance microloans for latrines to households, but it has failed to launch (only 2 demands have been honoured). The Revolving Fund was to be managed by the Water Management Team and aimed to provide credit to households in groups (see Fiche in Annex B). The main issue faced by TREND was the inadequacy of the initial seed money and the preference of households for pour-flush latrines, which could not be built with the proposed loan amount. As a result, the NGO indicated in their Project Completion Report (March 2014) that it is aiming to renew efforts to involve microfinance groups to provide additional funding to finance water-flush systems. It plans in the near future to finance loans over 18 months at a rate that reflects their daily expenditures on sanitation, until the loans are completely paid (with interest). In the meantime, the seed money that had been allocated to the revolving fund will be used to offer loans to the poorest households, i.e. those that opt for more basic technology options such as VIP latrines.

2. Link borrowers to existing microfinance organisations

Another strategy developed by AWF-funded projects is to link borrowers to existing microfinance organisations. Sanergy (Nairobi) for instance used its international profile to raise funds through the online Kiva microfinance platform[1]. This allowed financing 73 loans and constructing over 120 Fresh

[1] Kiva works with microfinance institutions to provide loans to people without access to traditional banking systems. By leveraging the internet and a worldwide network of microfinance institutions, Kiva lets individual donors lend as little as $25 to help create opportunity around the world. See www.kiva.org

Life Toilets in 2013. The success of this experience has demonstrated to a couple of local MFIs the business potential of sanitation microfinance, and the latter are now interested in working with Sanergy (See box 4 below). In Kisumu, the Kiwasco project is seeking to develop a sanitation micro-credit fund for households through a partnership with K-Rep Bank, Equity Bank or Family Bank, as all of these banks are currently involved in providing micro-credit in the water and sanitation sector.

Box 4 – Kiva provides zero-interest rate micro-loans to Sanergy entrepreneurs

Sanergy sells "Fresh Life" Toilets to local micro-entrepreneurs. The franchise package includes the installation of the toilet, marketing, training and business support, and a daily waste collection service for one year. It costs about USD 600 for the first year. One of the main constraints for micro-entrepreneurs to become Fresh Life toilet operators is the lack of access to finance to start up their businesses. In addition, Sanergy had limited working capital to provide support to a large number of entrepreneurs.

In September 2012, Sanergy partnered with Kiva, an online micro-lending platform, to offer flexible, zero-interest loans to future Fresh Life Operators. This is possible because Kiva sources funding through "crowd funding", i.e. online philanthropic lenders can make donations or lend money (without interest) to selected projects. The funding covers the upfront costs of the toilet purchase, enabling operators to pay back the loan with the revenue generated by the toilet. Toilet operators run their facilities as small businesses. The franchisees then charge people to use their toilets for a standard market fee (USD 0.04-0.06), enabling them to generate up to US$1,200 in additional income every year.

On average, each toilet receives between 50 and 60 users a day, allowing 20% of operators to hire support staff. Sanergy charges a small mark-up on the equipment to cover the costs of administering Kiva loans. As of January 2014, the partnership has led to 73 loans being issued and the construction of over 120 Fresh Life Toilets. Those operators serve 5,000 residents with hygienic sanitation daily. At the same time, Kiva provides a communication platform to share the resilient, compelling stories of Fresh Life micro-entrepreneurs with the world. The partnership with Kiva has enabled Sanergy to scale its toilet distribution more quickly, and helping entrepreneurs make money while providing a safe sanitation option to hundreds of more people.

3. Provide support for financing hardware through leasing or franchising

Another solution to support SMEs' access to finance is to provide them with financing solutions tailored to their business needs, in particular to finance their assets. In particular, leasing trucks to emptiers can support the growth of emptying services. Such schemes are envisaged in the projects led by the Monrovia City Council, and in the Kisumu and Kampala projects. In the first case, trucks will be leased directly by the city council. In the two other cases, trucks will be leased by the utilities (Kiwasco and NWSC).

Another strategy for supporting SMEs' finances can be found under the franchise model. Amanz' abantu, for instance, acts as franchisor and pre-finances equipment for its franchisees. In these schemes, supporting organisations are buying the assets on behalf of beneficiaries which then repay them in tranches. This can include an interest rate and there can be (or not) a transfer of ownership once the equipment has been fully repaid. However, such a scheme requires that the supporting organisation has sufficient cash flow to pre-finance the assets. Seed-funding for this kind of arrangements could be provided with AWF funding. It could then be recycled to finance assets for other SMEs.

3.4. Develop an integrated business approach to sanitation service provision

Challenges faced

The provision of sanitation services is often conducted by informal SMEs which have limited business skills. As a result, sanitation service providers often lack **business drive**: prices for users and operating costs for service providers are both high. There is a potential to reduce the costs of service provision through an emphasis on making efficiency gains and achieving economies of scale.

In addition, innovative solutions that have been developed to respond to sanitation challenges (such as Ecosan toilets, small emptying digesting trucks, reuse of FS), are often unable to scale-up. This is often due to the fact that they would need to be **developed as part of a business model in order to**

be sustainable, based on a sound understanding of demand and supply on the market for these solutions.

What needs to be done?

Support needs to be provided to entrepreneurs so that business-led sanitation firms develop a clear business and financial strategy that aims at increasing service coverage at a low cost for lower income consumers. Gaining market shares can increase their revenues, thus creating a virtuous cycle where markets enable to increase sanitation service provision. These businesses can then be self-driven to provide sanitation services in a sustainable way.

Developing innovative "business models"[2] in the sanitation sector entails finding new ways of delivering services along the sanitation value chain, with a sustainable financing strategy, so as to ensure service provision at the level of an entire city (region or country) at an affordable price for customers. This includes identifying the appropriate technologies and service modality that address customers' needs, as well as the sources of revenues to cover the costs over the entire life cycle of the service, beyond the end of the project.

How do the AWF-funded projects promote an integrated business approach?

The table below presents the range of possible types of business models that have been developed along the sanitation value chain (projects in italic are being tested), with some examples.

Table 3. Types of business model that can be developed along the sanitation value chain

Level	Market-based sanitation solutions	AWF projects	Type of model developed	Other comparable examples
Household sanitation	Provision of home toilets or individual sanitation solutions (on-site) (fixed or mobile)	Sanergy (Nairobi)	Marketing and sale of the "Fresh life" toilet and daily servicing	Biofilcom, SaniShop, 3S, Clean Team, PeePoo Bag, IDE Cambodia
	Sludge removal and transportation services	*Kiwasco (Kisumu) and CIDI/NWSC (Kampala)*		3S, Clean Team,
Shared sanitation	Provision of public toilets (fixed or mobile)	Sanergy (Nairobi)	**Franchise model:** Marketing and sale of the "Fresh life" toilet to a network of franchisees and daily servicing.	Iko-toilet, DMT, Sulabh public toilets…
		Safisana (Ashaiman)	Operation of public toilets by micro-entrepreneurs.	
	Servicing of public toilets (fixed or mobile)	Impilo Yabantu (Eastern Cape Coast)	**Franchise model :** Servicing of school toilet facilities through a network of franchisees	
	Connection to off-site sewage system (main utility or mini-utility)	*IWWI Design for re-use research*[3]		Sanimas Borda
Reuse	Processing of by-products from FS or waste water (fertiliser,	Safisana (Ashaiman) Sanergy (Nairobi),	Production and sale of FS by-products (*although this might need to be combined*	WasteEnterprisers

[2] A "business model" describes the rationale of how an organisation creates, delivers, and captures value in certain economic, social, cultural or other contexts. It defines the value proposition of an organisation along the following lines: who is the customer, what solution or experience is the organisation offering, and how this value is delivered at an appropriate cost (i.e. what is needed to deliver: resources, assets, business processes, partners, etc.) (Abel, 1982).

[3] This research project aims to develop wastewater and FS re-use viable business models.

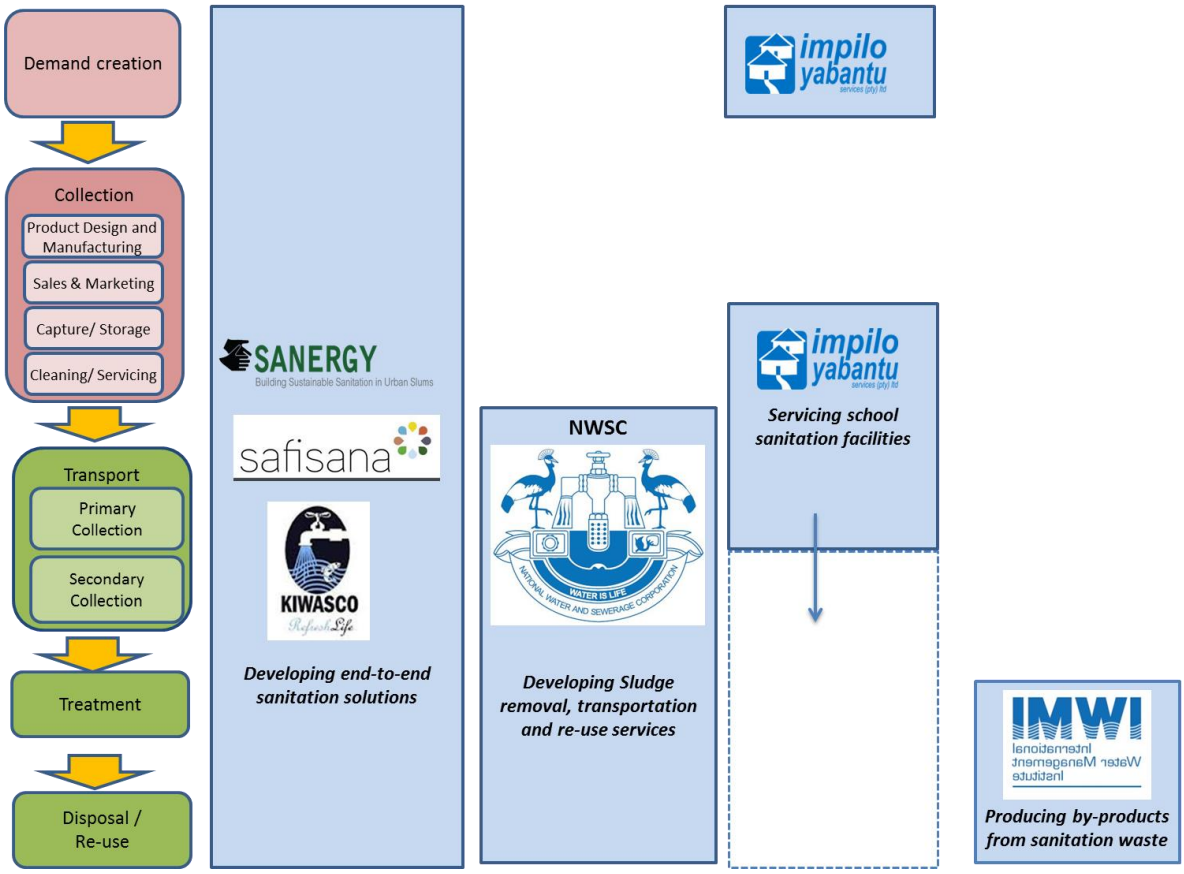
Level	Market-based sanitation solutions	AWF projects	Type of model developed	Other comparable examples
	gas)	*IWMI research Impilo Yabantu (Eastern Cape Coast)*	*with other activities to be profitable*)	

AWF-funded businesses have adopted different strategies to improve the sustainability and scale of their activities based on a "business-model" approach.

1. **Integrating several elements of the sanitation value chain**

The projects funded by AWF that have adopted a "business-led approach" have tended to adopt an integrated approach to sanitation, including offering services from demand creation to reuse, as represented in Figure 8 below.

Figure 8. Business models developed by AWF projects along the sanitation value chain



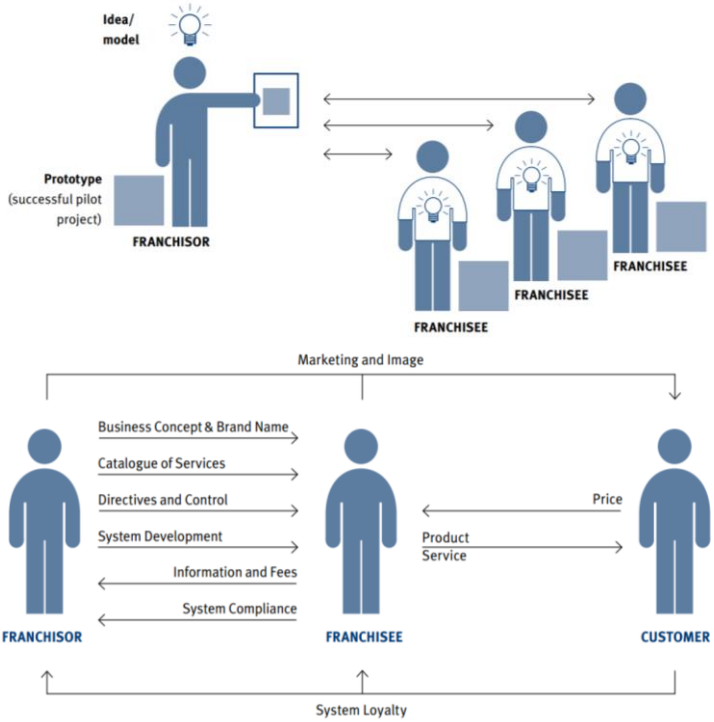
In these projects, vertical integration is developed as a strategy to strengthen the profitability and sustainability of the business model. Indeed, as faecal sludge management may not be a very profitable activity in itself, combining it with other activities such as FS reuse for instance can allow generating additional revenues from selling FS by-products to cover the operations costs of collection and treatment. The financial viability of FS reuse is currently being tested by several business models (Safisana and Sanergy) and by the IWMI research project. Combining FS reuse with upstream activities also allows the businesses to secure a more reliable input flow for their reuse activities.

2. **Develop franchises to service sanitation facilities**

Franchising is used in two of the AWF-funded project (Amanz' abantu and Sanergy), as a way to scale-up an approach to service delivery. The franchising model is briefly described in Box 5 below, whereas Box 6 presents the AWF-funded projects that have used franchising as a scaling-up strategy.

Box 5 - Franchising: a brief overview

Commercial franchising is "a grant made by the franchisor to the franchisee, entitling the latter to the use of a complete business package containing all the elements necessary to establish a previously untrained person in the franchised business and enable them to operate it on an on-going basis, according to guidelines supplied" (Parker and Illetschko, 2007). The franchisor offers assistance in organising, training, merchandising, marketing and managing in return for a monetary consideration. The overall objective of franchising is to develop a sound business model that can be replicated by entrepreneurs. The figures below show the relationships between the franchisor, franchisees and customers.



The key strengths and limitations of the franchising model are presented in the table below.

Strengths	Limitations
• Foster microenterprises by providing them a "ready-to-use" business model ("Business in a box") and ongoing mentoring required (training, equipment, finance, initial contacts and/or contracts to launch a business). • The franchisor plays a key ongoing support role to address problems as they arise during the development of the project. • Can significantly reduce the cost of service provision (above a certain threshold to cover the franchisor fixed costs) while increasing its quality. • Facilitates scaling-up a business model. Local communities benefit from the transfer of skills to local personnel. This strengthens local capacities for business development and creates jobs within communities.	• Affordability of the service for end-users may be an issue if franchisees' prices are not regulated. • Cash flows issues for franchisees depending on the payment process. • Less suitable for infrastructure intensive business models. Access to finance will be a barrier for small entrepreneurs. • The relationship between franchisors and franchisees relies mainly on trust. This can be quite risky, especially in countries where contract enforcement is variable. Recruitment of franchisees needs to be carefully done. • Franchisees can be hard to retain and there can be resistance from franchisees to pay fees over time.

Source: Ahlert et al (2008)[4]

[4] *Source : Ahlert et al (2008, Social Franchising: A Way of Systematic Replication to Increase Social Impact [Online] available from* *http://www.stiftungen.org/fileadmin/bvds/de/Projekte/Projekttransfer/Social_Franchise_Manual_Englisch.pdf*

Box 6 - Examples of franchise models funded by AWF

Two of the AWF-funded project (Amanz'abantu and Sanergy) use franchising as a way to scale-up an approach to service delivery. Both projects have experimented the model at a pilot scale and are now aiming to scale it up with AWF funding.

Amanz'abantu. The Irish Aid-funded Butterworth pilot initiative covered the OM of 400 rural schools sanitation facilities. Six micro-entrepreneurs were identified, trained and contracted as franchisees under the supervision of a franchisor – Amanz'abantu through its subsidiary partner Impilo Yabantu. The latter is providing both water and sanitation services to schools and households in the area. The franchisees provided two types of services: i) cleaning existing sanitation facilities and providing hygiene education and awareness-raising among the pupils and staff; ii) emptying pits and septic tanks of faecal sludge/black water. This pilot leveraged about EUR 200,000-350,000 (3-5 million Rand) from the Department of Education and the municipality.

The franchise model that will be scaled up with AWF funding works as follow. Impilo Yabantu holds a service contract from the Department of Education through its mother firm Amanz' abantu. Franchisees are trained to perform full cleaning and rehabilitation of school facilities, as well as regularly emptying FS in a safe manner. They also receive business training on how to financially manage their business. They are trained to conduct hygiene promotion classes in schools. They receive technical support from the franchisor, which helps them define a servicing strategy after the first diagnostic of the situation of the facilities is done and find an appropriate solution for emptying the latrines. They also receive financial support, through loans to buy the equipment for instance. Franchisors pay back a percentage of their revenues to the franchisor in exchange of the support and the right to use the brand and the contracts of the franchisor.

As presented above (Box 2 and Box 4), **Sanergy** provides public toilets in slum areas through a network of franchisees. As of April 2014, Sanergy had successfully launched 372 Fresh Life Toilets run by 192 Fresh Life franchise operators in Mukuru, Nairobi – a slum of 500,000 people. Each toilet receives an average of 50 paying users each day and over 15,000 residents now have access to hygienic sanitation. Their franchise network has created a further 50 jobs in the community for operating the sanitation businesses. The franchise model works as follows. Entrepreneurs buy a "business-in-a-box", which includes the low cost "Fresh Life" toilet to build, material for branding and promotion (See Box 2), and cleaning kit. Franchisees are also provided with business training, microfinance (See Box 4) and support to launch their business. They pay an annual fee to Sanergy for the daily emptying of the toilet.

The **Amanz' abantu pilot project in Eastern Cape** demonstrated that franchising can be a very successful model: thanks to the support provided by the franchisor, it ensured the quality and reliability of the services delivered. It also proved that the franchisor and franchisee's relationship can be viable in the longer term. According to project implementers, the main lessons were:[5]

- Setting up a franchise requires an important amount of management attention from the franchisor, so as to ensure that service delivery follows the franchisor's guidelines. The initial assistance in the start-up phase is crucial and should include: basic business and administrative training, and training on the operational methodology;
- The relationship between franchisors and franchisees is essential. Potential franchisees must be chosen carefully on the basis of their entrepreneurial drive and commitment to the values of the franchisor and business principles. They should be persons with a stake in the community of the area to which he or she provides the service. To minimise the risk of low performance by franchisees, provision can be made in the franchising agreement to penalise or replace non-performing franchisees;
- Cash flow issues can quickly put any small enterprise out of business. Therefore, careful attention must be paid to resolving any procedural issues around the payment process between the franchisee and the client to ensure prompt payment of invoices;

[5] From Project PAD- Annex 10 "Lessons learnt from the Pilot Butterworth project on franchised operations and maintenance of school sanitation facilities" and Jay Bhagwan, Kevin Wall, and Oliver Ive (2010) "Using franchising principles to improve water services reliability"

- In order to facilitate rapid and dissension-free agreement that the work has been performed according to contract, the scope of work must be defined very clearly. Tasks must be as standardised as possible with assigned standard prices.

Sanergy has also sought to extract lessons from its franchising experience, by collecting sales data from their franchisees to integrate lessons into their daily operations. The results were as follows:

- Successful sanitation operators tend to be female, business owners or landlords who have installed the Fresh Life toilet in household plots, in another business or at slum entry points, and who target residents and local business owners as customers, rather than commuters;
- Entrepreneurs who hire employees as operators have 10% more users. This encourages Sanergy to provide business training and support to youth in the community who can be employable as operators but who may not have access to land or financing to purchase their own toilets.

3.5. Strengthen municipal institutions

Challenges faced

In most of the towns under review, municipalities are responsible for ensuring the provision of adequate sanitation services to their population. This does not mean that they have to provide all these services themselves. In fact, in many cases, they are not currently providing such services. But municipalities still need to play a key role in terms of planning sanitation services, ensuring coordination between the multiple actors, defining the regulatory framework for these different actors in order to define a levelled playing field, by setting out rules and enforcing them. Enforcing rules (the "stick" approach) in particular can be a critical factor to ensure sustainability of any sanitation approach.

In the majority of towns, however, municipalities are not playing their role adequately because of weak implementation and enforcement capacity and a lack of technical expertise on sanitation. In addition, unclear of shifting priorities affect the delivery of sanitation services. For example, by-laws regulating sanitation behaviour and activities of service providers are either not in place or not enforced. The absence of such a favourable "supporting environment" threatens the sustainability of sanitation services.

What needs to be done?

Projects can finance activities to strengthen the municipality so that it can be a driving force to plan and coordinate stakeholders so as to improve the sustainability of services along the sanitation value chain. A strong municipality is better placed to guide a holistic approach to urban sanitation planning as it has a global vision on the sanitation value chain and on other related issues such as housing, drainage, environment, etc. Municipalities should draft city-wide sanitation (master) plans defining how the population will be served by sanitation services in the longer term (20 to 25 years), with the objective of achieving a radical improvement in the delivery of services and keep pace with projected population growth. Such plans should also reflect on the fact that rural and peri-urban areas will become urban in a few years. They should include associated financing plans, to cover operating and maintenance costs, so as to provide a basis for investments that go beyond the AWF-funded project and can provide a basis to attract other sources of finance. The preparation of such plans would need to be done in a consultative and collaborative manner so as to build the capacity of the municipality and include representatives of various groups, including service providers, NGOs and communities.

The municipality also needs to be involved and supported so as to be able to resolve issues that fall under their institutional prerogatives, including:

- Setting up and enforcing sanitation by-laws to set standards, ban unacceptable sanitation behaviour and keep the environment clean;
- Organising the sanitation markets and regulating services. The municipality can help formalise the sanitation services, by supporting the creation of enterprise associations, for mechanical emptying for instance and setting rules to regulate their activities (such as banning emptying of tanks in the environment);

- Resolving land tenure issues (to provide land for public latrines or a FSTP).

The role played by the municipality should be to plan and oversee. It does not have to prescribe to the private sector how sanitation services have to be delivered, but it needs to define the services required and set the rules.

How do the AWF-funded projects strengthen municipal institutions?

AWF-funded projects always involve municipalities in recognition of the key role they have to play to support projects' sustainability. Two main types of measures are planned or have been taken to strengthen municipal institutions: capacity building and setting up sanitation coordination platforms led by municipalities.

1. Building the capacity of municipalities

Most of the AWF-funded projects (8) provide capacity building to municipalities to plan and support un-sewered sanitation services. This is done through providing "on-the-job" training to municipality staff as well as hiring consultants to help them manage the project. In this case, however, they will need to ensure that permanent municipal staff is also trained by these consultants, so that municipal staff would be able to carry out the consultants' tasks at the end of the project. Several projects also involve universities (University of Ziguinchor, University of Arba Minch for the projects in those cities) and NGO partners (TREND in Ghana, CIDI in Kampala, CARE in Bouaké and Katiola, PLAN TOGO in Sokodé) to train and support municipalities. The support role may also be provided by utilities (LWSC in Monrovia and ONAS in Ziguinchor).

2. Placing municipalities in the driving seat

AWF's approach is to strengthen the capacity of municipalities to manage FS and enforce regulations. In most projects, municipalities are in the driving seat, either as executing agency or grant recipient (or both), when they have demonstrated capacity and strong enthusiasm. This has been the case in 5 AWF-funded projects (See Table 1 above in Section 2.2). This goes beyond capacity building as it gives free reign to municipalities to design and implement their own plans. This "Learning-by-doing approach" might enable stronger sustainability of the activities implemented by the project as project management skills will be located in the municipality (although this will only be true if permanent staff are managing the project rather than consultants). To enhance sustainability, municipalities should be supported to enforce regulations and create a level-playing field for all service providers.

The TPP project (TREND, Ghana) has set up an interesting "tri-partite" approach to improving sanitation involving the public, private and NGO sectors. It aimed to actively include municipalities in this NGO-led project so as to build their capacity (although this has only been semi-successful so far). TREND provided "hands-on" capacity development to the municipalities, so as to involve them in the planning of the public sanitation facilities with support from consultants. At the end of the project, the Water and Sanitation Management Teams (WSMT) were set up (with representatives from the municipality and other stakeholders from the private and public sectors) to manage the daily planning and oversight of the contractors operating the public sanitation facilities. WSMT were trained by consultants. This was a good solution to embed capacity to oversee sanitation services at town level. However, their performance has been unequal so far and for all towns, the oversight of the WSMT from the municipality needs to be improved, as set out in Box 7 below.

Box 7 - TPP Project (Ghana) – Strengthening municipalities through a tri-partite approach

From 2009 to 2013, TREND implemented a WASH project in 3 cities of Ghana (Ashaiman, Huni Valley and Mankessim). It aimed to address the deficiencies of local governments' implementation capacity by testing new approaches to pro-poor WASH service delivery involving tripartite partnerships between the municipality, NGOs and CBOs, and private contractors. The end goal of the project was to build capacity in the towns for delivering WASH services in a more sustainable manner.

The tripartite partnership was operationalised within pilot project towns through (i) the **development of "Learning Alliances"** as a multi-stakeholder platform for consultation and coordination; and (ii) the **establishment of Water and Sanitation Management Teams (WSMT)** to supervise the facility and represent

the interests of community members in the post construction stage. To support them, TREND provided hands-on capacity building for the Municipal and District Assemblies (MMDAs) and for the WSMT for sustained management of the facilities.

The "Learning Alliances" (LA) established were a group of representatives of all key stakeholders within the towns including CBOs/NGOs, traditional authorities, unit committees, the Municipality and key sector agencies. Consultations were regularly held on a monthly/bimonthly basis and were hosted and chaired by key staff of the municipality. **LA platforms have successfully ensured stakeholder buy-in and partnership building** and contributed to ensuring a **high level of cooperation between municipalities/districts and their agencies, CBOs/NGOs and private sector**.

Towards the end of the construction of facilities, **WSMT were formed to handle the day-to-day management of facilities, planning and oversight of private operators**. In all the three towns, WSMTs are composed of representative groups drawn from the MMDAs, civil society groups and private operators. The composition and profile of WSMTs are expected to ensure that:

- MMDAs recognise their role as the legal owners of facilities and provide the needed facilitating environment for operations of the WSMTs, including ensuring a pro-poor approach to gender equity and transparency;
- Civil society plays a key role in decision making and ensures day-to-day monitoring of the performance of private operators;
- The private operators operate within a secure environment and a contractual framework, free from political interference.

The WSMT have experienced different levels of effectiveness in the three towns:

- In the Huni Valley, the WSMT holds promise for efficient and sustainable operation;
- In Mankessim, results have not yet been achieved. The Project Completion Report (April 2014) recommended taking actions to improve transparency and accountability of the WSMT and regulate more closely its activities, as well as taking sanctions for defaulting contractors. Immediate actions are to be taken to normalise the operation of public latrines and to get it to function as designed. A formal evaluation was recommended with a case study to disseminate lessons;
- In Ashaiman, the WSMT has not been very effective, but this could be due to start-up problems with private operators. More focus on performance and targets are needed and more effort is required to strengthen the contractual framework for operations of the private operators.

Now that the TPP project is ending, **the sustainability challenge is to embed the LAs and WSMT in the regular sanitation planning activities of the municipalities**, so that they do not remain ad-hoc to the TPP project, but are used on an ongoing basis. This includes tackling two main issues:

- First, for all towns**, the oversight of the WSMT from the municipality needs to be improved and formalised** so that the management of public latrines is effectively monitored. Continued support will be required to ensure that the management systems continue to be sustainable. The continued engagement of the WSMT with all stakeholders is to be assured through the continued operation of the Learning Alliances established during the project.
- Second, **the "software" component of the projec**t, including the continuous management of the LAs and WSMT, **requires a sustainable source of funding** to continue to run after the end of the project. In the future, the role of the WSMTs could be secured through sharing revenues of the public latrine facilities and water kiosks (in Huni Valley).

Additional studies would be required in future years to evaluate whether these different approaches have been efficient at building long-term planning capacities in municipalities, and in which context.

3. Setting up coordination platforms led by the municipality

To coordinate the roles and activities of the different actors involved in onsite sanitation in the towns (such as NGOs, service providers, communities, etc.), projects can set up coordination platforms or groups led by municipalities. These boards are essential to coordinate activities so as to have a global vision of the sanitation value chain and start planning integrated city-wide sanitation services. They can strengthen the municipality's strategic and leading role for planning and supervising sanitation services.

Projects have set up project steering committees involving all stakeholders. However, these are usually project-specific and are likely to stop meeting at the end of the project. One solution proposed by the TPP project (TREND, Ghana) is to establish a working group involving all stakeholders as part of the municipal sanitation institutions. The project has developed a "Learning Alliance" in each of the three pilot towns (as well as on the national level). Further efforts still need to be deployed to embed these platforms in the regular sanitation planning activities of the municipalities, and provide them with regular funding (such as earmarking revenues from public sanitation facilities) to keep them running (See Box 7 above).

4. Conclusions

The AWF-funded urban sanitation portfolio includes a broad mix of projects that are intervening at different steps of the sanitation value chain, both on the demand and on the supply sides of the market, with a view to promote an integrated approach to urban sanitation provisions. They are being implemented through a mix of institutional models (business-led, NGO-led or municipality-led) but they have also correctly identified the need to strengthen municipal governments so that they can plan, supervise and support sanitation services delivery. They would also need to define and enforce regulations where needed.

Many of these projects have adopted a mix of strategies to ensure the sustainability of the projects beyond AWF funding. It is too early to draw definitive conclusions about whether they have been successful at doing so, however. In some cases, it is too early in the life of the projects, whereas in the case of completed projects, an independent and in-depth evaluation of the projects' results is still to be undertaken. Such evaluations should nevertheless be done in years to come, as the AWF portfolio of projects provides an invaluable opportunity to better understand what works in terms of promoting un-sewered urban sanitation in Africa and beyond.

Learning from this diverse set of projects will enable us to extract learning on a wide range of publicly-funded sanitation activities, such as the most appropriate ways to support municipal authorities in the sanitation sector or to scale-up microfinance schemes to ensure that both households and sanitation entrepreneurs can access financing. The portfolio of projects will also enable us to learn more about the advantages of developing integrated business solutions to provide sanitation services and successful approaches.

Comparisons with other ongoing initiatives will also help identify where innovation boundaries can be pushed further in the area of urban sanitation, such as in the area of pricing structures (to introduce services in which customers pay a regular sum for a serviced facility for example), with regards to structuring emptying services and making them more customer-responsive, or in the area of sanitation promotion and marketing, including for desludging services and reuse products.

To stimulate innovation, the AWF and other funders may also need to explore alternative ways of financing such approaches aside from traditional grant-making, including through outcome-based grants, challenge funds or innovation prizes.

Annex A – Summary of project portfolio

Table A.1 - Key characteristics of projects in the AWF urban sanitation portfolio

Country	Cities	Project Title	Grant signature date	Grant Duration	AWF Grant Amount (% of total budget)	Expected number of beneficiaries	Grant Recipient	*Executing Agent* and Implementing partners	Current status
Ethiopia	Arba Minch	Sani Poor- Marketing & service chain support for total sanitation	n.a.	3 years	≈EUR 1.25 M (77%)	100,000	Arba Minch Municipality	***Arba Minch Municipality;*** University of Arba Minch	In preparation
Ghana	Ashaiman	Design for Reuse	2010	2.5 years	EUR 498,000 (88%)	n.a.	Water Resources Commission	***Water Resources Commission;*** International Water Management	About to be completed – final outputs were delayed.
Ghana	Ashaiman	Tripartite Partnership Project	01/2010	2 years – extended to 03/2014	EUR 2 M (74%)	34,600	TREND	***TREND,*** Municipal Assembly	Completed after delays. Outputs were more or less achieved, but with serious doubts on the sustainability of outcomes.
Ghana	Ashaiman	A Business Approach for Improved Sanitation in Ghana: Organic Fertilisers and Energy as Drivers	2013	3 years	EUR 1.08 M (68%)	125,000	TREND	***Safisana,*** Ashaiman Municipality	In implementation
Malawi	Blantyre	Improving Access to Water and Sanitation for the Urban Poor	2009	3 years- extended to 2014	EUR 610,790 (75%)	1,000	CCODE	***CCODE***, Malawi Homeless People Federation, Blantyre City Assembly	Completed
Ivory Coast	Bouaké & Katiola	Fostering access to toilet and jobs through faecal materials reuse	09/2013	3 years	EUR 1.25 M (82%)	810,000	Union des Villes et Communes de Côte d'Ivoire via the Ministry of Economy and Finance	***CARE international Côte d'Ivoire***	Implementation recently initiated. Many aspects still need to be further defined.
Bénin	Grand-Nokoué	Improving faecal sludge management through a PPP	06/2013	3 years	EUR 1.1 M (21%)	1,015,000	Sèmè-Podji municipality	***AGETUR-SA*** and SIBEAU (owner and operator of the FSTP)	In implementation, tendering phase.
Uganda	Kampala	KUPSIP – Kawempe Urban Poor Sanitation Improvement Project	09/2012	3 years	EUR 1 M (74%)	100,000	CIDI	***CIDI;*** NWSC; Kampala City Authority	In implementation
Kenya	Kisumu	Introducing innovative Sanitation	n.a.	3 years	≈ EUR 1.2 (56%)	48,000	KIWASCO	***KIWASCO***, Kisumu Municipality, VEI, HDSR, SANA	In preparation
Liberia	Monrovia	Fostering Innovative Sanitation and Hygiene	04/2013	2.5 years	EUR 1.2 M (87%)	540,000	Monrovia City Corporation (MCC)	***MCC,*** Liberia Water and Sewerage Corporation	In implementation, tendering phase.

Country	Cities	Project Title	Grant signature date	Grant Duration	AWF Grant Amount (% of total budget)	Expected number of beneficiaries	Grant Recipient	*Executing Agent* and Implementing partners	Current status
		(FISH)							
Kenya	Nairobi	Sustainable Sanitation in Urban Slums (Sanergy)	02/2014	2 years	EUR 731,400 (25%)	100,000	Athi Water and Sanitation Board	***Sanergy*** Nairobi Water, and Nairobi City Council	In implementation with other funding. AWF grant about to be signed.
Togo	Sokodé	Toilets for all, through the valorisation of FS and microcredit	05/2013	3 years	EUR 1.1 M (74%)	100,500	Sokodé Municipality	***Sokodé Municipality***, Plan Togo	In implementation, tendering phase.
Sénégal	Ziguinchor	Improving sludge Management through Reuse	11/2013	3 years	EUR 1.3 M (77%)	135,000	Ziguinchor Municipality via Ministry of Economy and Finance	***Ziguinchor Municipality,*** University of Ziguinchor	In implementation, tendering phase.
South Africa	Eastern Cape Province	O&M of school facilities through social franchising (Amanz' abantu)	n.a.	2.5 years	≈ EUR 1.09M (43%)	100,000	Eastern Cape Department of Education	***Eastern Cape Education Trust and National Business Initiative,*** Amanz' abantu Services (and its subsidiary Impilo Yabantu)	In preparation

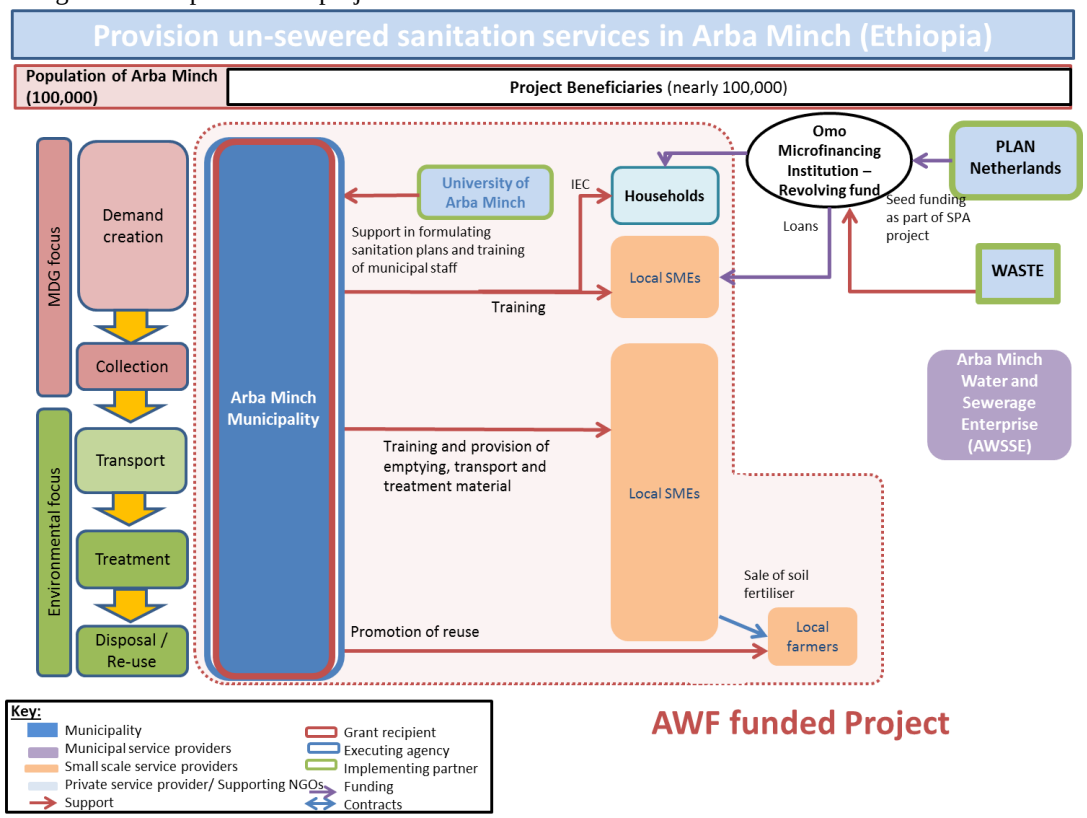
Table A.2 - Urban sanitation services sustainability strategies implemented in AWF funded-projects

Country	Cities	Project Title	Create demand	Develop service providers skills	Facilitate access to finance	Develop an integrated business approach	Strengthen municipal institutions	Key features
Ethiopia	Arba Minch	Sani Poor- Marketing & service chain support for total sanitation	✓	✓	✓		✓	• Multi-channel IEC campaign • Training and equipment of SMEs • Partnership with sanitation microfinance project (Revolving Fund) • Capacity Building of the municipality
Ghana	Ashaiman	Design for Reuse		✓				• Training of WWTP operators to reuse techniques • Research on the financial viability of FS reuse
Ghana	Ashaiman	Tripartite Partnership Project	✓		✓		✓	• IEC campaign and Sanimart (limited success) • Microfinance through a Revolving Fund (limited success) • Training CBOs, toilet operators and artisans • Partnership approach with municipality
Ghana	Ashaiman	A Business Approach for Improved Sanitation in Ghana: Organic Fertilisers and Energy as Drivers (Safisana)	✓	✓		✓		• Hygiene promotion • Training and equipment of toilet operator and collector • Business approach to reuse
Malawi	Blantyre	Improving Access to Water and Sanitation for the Urban Poor	✓	✓	✓			• Microfinance through a revolving fund • Training of CBOs and local masons • Promotion of EcoSan
Ivory Coast	Bouaké & Katiola	Fostering access to toilet and jobs through faecal materials reuse	✓	✓	✓			• Sanitation marketing through local CBOs and SMEs • Promotion of EcoSan and Urine diverting latrines • Training of micro entrepreneurs • Microfinance to sanitation entrepreneurs through revolving fund • FS Reuse under study (organic fertiliser and urine fertiliser)
Bénin	Grand-Nokoué	Improving faecal sludge management through a PPP		✓				• Professionalisation and organisation of mechanical emptiers • Development of a business approach for the FSTP, including reuse
Uganda	Kampala	KUPSIP	✓	✓	✓		✓	• Dynamic IEC and collaboration with municipality for enforcement • Microfinance to households through a revolving fund • OM Users committees • Franchise between utility (NWSC) and emptiers, Leasing

Country	Cities	Project Title	Create demand	Develop service providers skills	Facilitate access to finance	Develop an integrated business approach	Strengthen municipal institutions	Key features
								trucks and training, FSM model with municipality • Reuse • Capacity building of the municipality
Kenya	Kisumu	Introducing innovative Sanitation	✓	✓	✓	✓		• Project managed by the utility (Kiwasco) • Sanitation micro-credit with K-Rep • Sanitation levy on water bills • Professionalisation and organisation of mechanical emptiers • Leasing of trucks to emptiers
Liberia	Monrovia	Fostering Innovative Sanitation and Hygiene (FISH)		✓	✓		✓	• Training of CBEs for operation of toilets • Community associations of users • Leasing of truck • Capacity building of municipality with support from utility
Kenya	Nairobi	Sustainable Sanitation in Urban Slums (Sanergy)	✓	✓	✓	✓		• "Fresh Life" toilets for slums • Sanitation marketing • Franchise operation of public toilets • Microfinance to sanitation entrepreneurs through an online lending platform • FS Reuse: organic fertiliser, bio char, urine fertiliser and biogas
Togo	Sokodé	Toilet, Treatment & Reuse	✓	✓	✓		✓	• Set up of sanitation committees for demand creation and neighbourhood's fund • Sanitation microfinance • Training of emptiers • Capacity building of municipality
Sénégal	Ziguinchor	Improving sludge Management through Reuse	✓	✓	✓		✓	• Set up and training of CBE for demand creation and neighbourhood's fund • Promotion of EcoSan facilities • Sanitation microfinance (still to be defined) • Licencing and Training of emptiers and local masons • Strengthen FSTP operator (reuse) • Capacity building of municipality
South Africa	Eastern Cape Province	O&M of school facilities through social franchising (Amanz' abantu)	✓	✓		✓	✓	• Demand creation and school sanitation clubs • Franchise SMEs for school toilets O&M • Training and capacity building for government

Annex B – Project profiles

This Annex contains summary project profiles on a standard format for each of the projects in the AWF urban sanitation portfolio. The respective project briefs can be accessed through the clickable link below. These project briefs will be updated as implementation progresses.

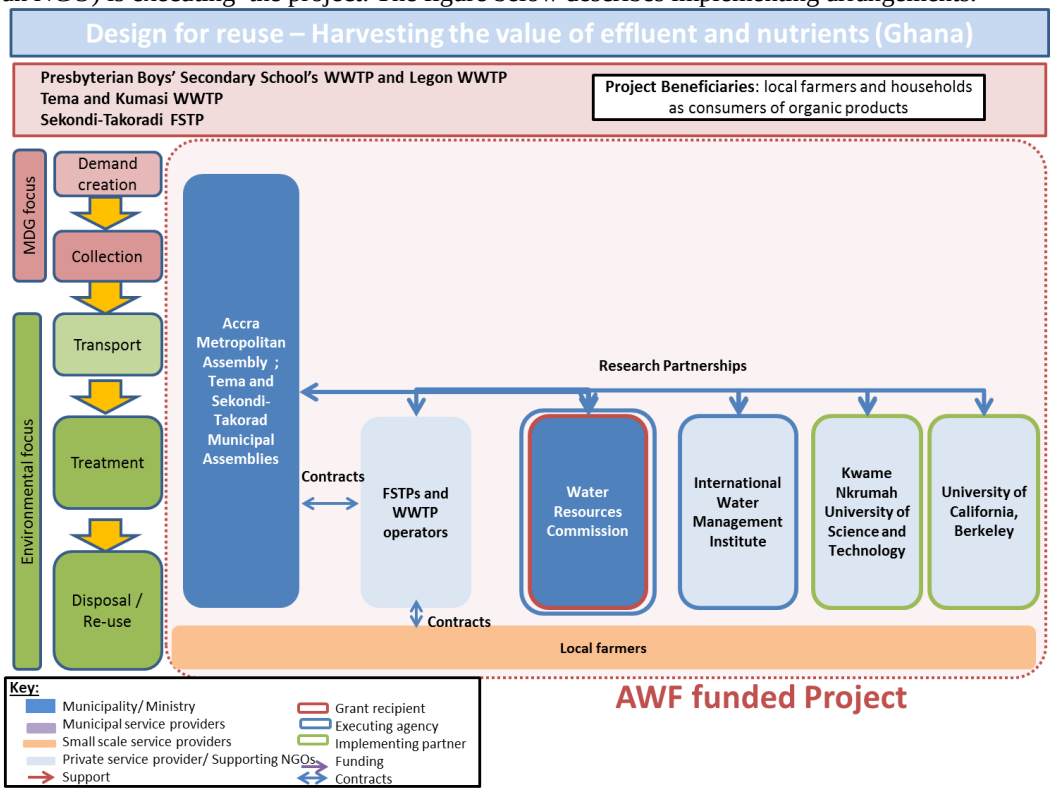
Marketing & service chain support for total sanitation in Arba Minch (Ethiopia)	
AWF grant implementation status, dates and budget	• Status: The appraisal report is in still under review. • Length: The project is due to be implemented for a period of 3 years. • Project budget: The total project budget is at present of EUR 1.665 million and the AWF grant will be around EUR 1.255 million (77% of the total project cost). Arba Minch municipality will provide the remaining EUR 0.415 million in cash and in-kind.
Geographical scope and scale	• Scope: The project will be implemented in Arba Minch (a small town in in Southern Ethiopia), where 50% of the population use unimproved sanitation. • Scale: The project targets the 100,000 inhabitants of Arba Minch.
Project objectives	The project has 2 main objectives: • Stimulate demand for sanitation via professional sanitation marketing, with regular campaigns including Total Sanitation, Sanitation Marketing and hand washing with soap; • Strengthen the local private sector: create supply chains for sanitation goods and services; improve value for money through completion, marketing to households and communities and enable sustainable sanitation businesses.
Institutional and funding arrangements	The municipality of Arba Minch is leading the project. The project will be rolled out in conjunction with the Dutch-funded Sanitation Project in Peri-urban Areas of Africa (SPA). Arba Minch municipality (grant recipient and executing agency) will implement the AWF-funded project in partnership with the SPA programme's key stakeholders, including the Omo Microfinancing Institution (OMFI), a government affiliated microfinance institution and the Dutch NGOs WASTE and Plan-Netherlands. The municipality will also rely on the support of Arba Minch University to develop sanitation plans for the town. The figure below describes the institutional and funding arrangements adopted for the project. 
Activities financed by AWF	The AWF grant will fund: • **Component 1:** Baseline survey and awareness creation activities through a "Life-time campaign", an integrated Information and education campaign using various communication channels (TV, radio, road shows, media material, educational material, etc.) • **Component 2**: Provision of sanitation services: training of local SMEs, formulation of a sanitation business plan, establishment of sanitation showrooms, procurement of one vacuum truck, donkeys and donkey carts for transportation of human waste, sludge drying beds • **Component 3:** Building capacity of the municipality's staff, a toilet design competition and competition for school health clubs

	• **Component 4:** Project management (including monitoring and evaluation)

Challenges to sustainability	Strategies developed
Low demand for improved facilities	Integrated IEC campaign to promote good hygiene and sanitation practices, Sanitation Showroom, competition among providers to propose better value
Potential lack of ownership for newly built sanitation facilities	Households cover the full cost of toilet construction and related services
Lack of funds to afford upfront costs of building adequate facilities	Partnership with the SPA project which provides microloans through OMFI (which also provides training on handling and repayment of the loan). The loan range varies from a minimum of ETB 886 (USD 40) for constructing pit latrines to a maximum of ETB 20,000 (USD 1,000) for constructing individual flush toilet with septic tank. Loans need to be repaid with interest in less than one to two years.
Little development of business oriented sanitation activities	Capacity building to train and support, micro-enterprises.
Lack of capacity at municipal level	Training of municipal staff to gradually take on activities led by NGOs

Additional benefits	• **Job creation**: Promotion of private sector involvement (and establishing sanitation as a viable business) is at the heart of the project; • **Green growth**: the project includes the procurement of faecal sludge drying beds for the production of compost. The project will include the production and sale of certified organic compost to support farmers of organic bananas for export and other fruits around Arba Minch; • **Gender and inclusion**: It is unclear how the project specifically addresses these issues.

Design for reuse - Harvesting the value of effluent and nutrients (Ghana)

AWF grant implementation status, dates and budget	• Status: AWF grant was approved in 2010 for 30 months. The project is now expected to finish in March 2015. • Budget: the project budget is EUR 559,800. The AWF grant amount is EUR 498,000, representing 88 % of the total project cost. The University of California Berkeley (UCB) will fund the remaining cost.
Geographical scope and scale	• Geographical scope: the project aims to build on research to deliver improvements for the management of WWTPs throughout Greater Accra: Presbyterian Boys' Secondary School's (Presec) WWTP and the Legon WWTP in Accra; WWTPs in Tema and Kumasi; the Sekondi-Takoradi FSTP. • Immediate beneficiaries are farmers around the WWTPs who will have access to a high quality, reliable and convenient water source for irrigation and aquaculture. Indirect beneficiaries are the consumers.
Project objectives	• The project is a pilot initiative focused on developing knowledge for wastewater reuse. The objectives of the pilot projects are to construct a WWTP to facilitate applied research into reclaimed water reuse for irrigation and to develop knowledge on aquaculture and biogas value chains through action-research and training of local planners on design for reuse. The output of the research is to produce implementation plans and transferrable roadmap.
Institutional and funding arrangements	The International Water Management Institute (a not for profit scientific institute, classified here as an NGO) is executing the project. The figure below describes implementing arrangements. 
Activities financed by AWF	The AWF grant is funding the following activities: • Assessment of demand from farmers for reuse products; • Analysis and monitoring of wastewater quality; • Construction of a low-cost treatment plant whose treated effluent will be reused for irrigation assess and select pathogen removal technology (i.e. maturation pond, UV disinfection), implement conveyance infrastructure from WWTP to fields/storage reservoirs; • Training of farmers and operators; • Development and implementation of a model to direct the added value from reuse in agriculture back to the plant to contribute to treatment cost; • Preliminary cost benefit analysis; • Activities to incorporate aquaculture at waste stabilisation pond (e.g. cost benefits of different fish species); • Determination of adequate composting technologies for composting municipal FS;

Design for reuse - Harvesting the value of effluent and nutrients (Ghana)

	• Design of transportation plans for FS, development of pricing and payment structure between Norpalm (farming industry) and Sekondi-Takoradi Municipal assembly; • Development of a cost benefit matrix of all biogas collection and end-use options at the Legon Waste Stabilisation Pond; • Implementation plans and transferrable roadmaps; • Knowledge sharing activities

Challenges to sustainability	Strategies developed
Lack of household demand for sustainable sanitation (and particularly low demand for emptying services)	Development and dissemination of knowledge on both the benefits and on the potential for reducing the costs of sanitation services (particularly when using income from reuse).
Social stigmas attached to consuming fish bred in treated wastewater	Public awareness raising activities and strategic marketing

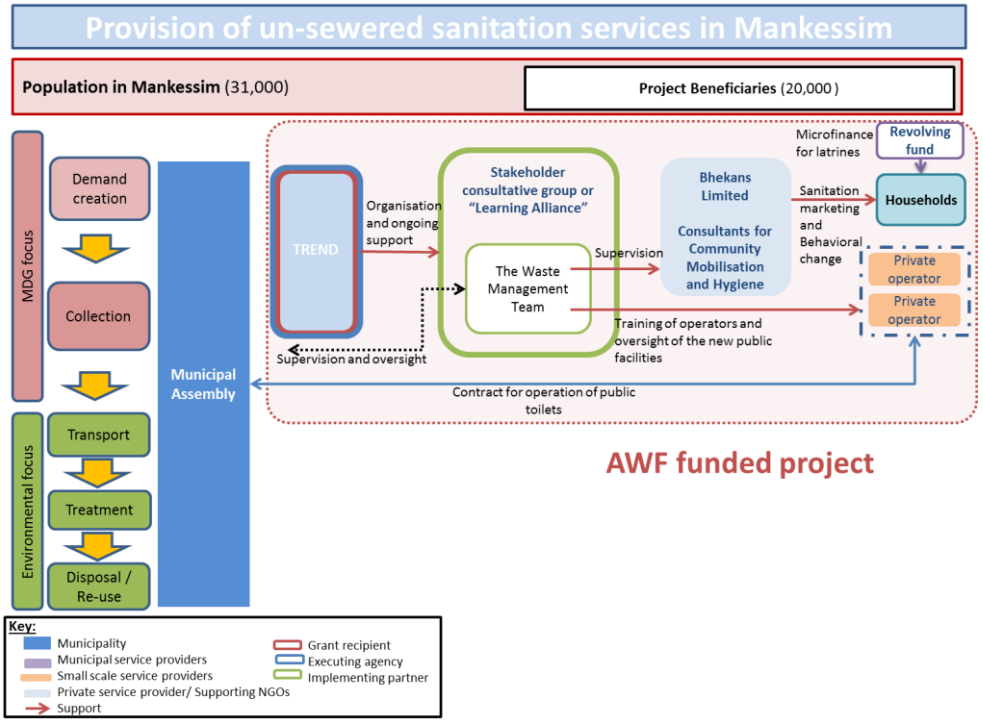
Additional benefits	• **Job creation**: The project seeks to develop aquaculture as a profitable activity more widely available in Ghana (where fish is often imported) and has the potential to create new jobs. • **Green growth:** The recycling of water and nutrients contributes towards resilience to climate change (through conservation of water resources).

Improved Sanitation and Water Supply Service Delivery to the Urban Poor in Ghana through Tripartite Partnerships, Ashaiman, Mankessim and Huni Valley (Ghana)

AWF grant implementation status, dates and budget	• Status: The grant agreement was signed in January 2010. Project implementation started in June 2010 for an initial duration of 2 years. It was extended a first time to June 2013 to accommodate changes in project scope and delayed construction, and then a second time to March 2014. Most of the outputs have now been finalised.
	• This grant was part of a broader project which was implemented in 3 phases:
	  • Phase 1 Sector Studies and Pilot Project Preparation (2008-2009)
	  • Phase 2: Development of Materials and Implementation of Pilot Projects (2010-2013)
	  • Phase 3: Learning from Pilots and Dissemination in the sector (2010 -2012)
	• Budget: Total spending for phases 2 and 3 was Euros 2,650,977.82 (from an initial budget of Euros 2,805,220, revised to Euros 2,658,283.19). AWF was the main funder and funded 1,975,030.51(74% of total spending) from an initial commitment of 1,979,000 Euros. TREND, the Netherlands Water Partnership and the MMDA were the other co-founders. However, NWP funding ended abruptly in December 2010 due to funding cuts by the Dutch Government.

Geographical scope and scale	• The project included pilot projects in three target towns (Ashaiman, Mankessim, Huni Valley). • The project benefited a total of 34,600 people (from an initial target of 45,000), including 5,600 people in Huni Valley, 20,000 in Ashaiman, and about 9,000 in Mankessim.
Project objectives	• Increase access to water supply and sanitation in three urban pilot areas, through testing a range of different innovative management models, approaches and technologies for providing WASH services to the urban poor and building infrastructure under these new management models; • Strengthen sector capacity for planning and delivery of pro-poor WASH services through tripartite partnership approaches involving the public, private and NGO sectors Provide infrastructure in 3 pilot towns; • Support an enabling environment (policy implementation, regulation, etc.) necessary for these innovations to be widely scaled-up.
Institutional and funding arrangements	• The NGO TREND leads the project, acting as grant recipient and executing agency. They established "Learning Alliances" in each of the three pilot towns (as well as on the national level). These were the key platforms to guide the project implementation and ensuring coordination between all sanitation stakeholders. The Municipal Assembly (MA), CBOs/NGOs, traditional authorities, unit committees, and key sector agencies were represented. Towards the end of construction of facilities, WASH Management Teams (WMT) were formed by the local Learning Alliances to handle issues relating to the day-to-day management of facilities and behavioural change interventions. WMT members (18) comprise staff of the MA, elected Assembly members, CBOs/NGO representatives and the traditional council. They elect an executive committee to lead their affairs. The WMT is external to the MA, which is supposed to monitor and control them. • The figure below describes the arrangement for provision of sanitation services by TREND in Mankessim (as an example). Implementation arrangements were similar in other towns.

Improved Sanitation and Water Supply Service Delivery to the Urban Poor in Ghana through Tripartite Partnerships, Ashaiman, Mankessim and Huni Valley (Ghana)



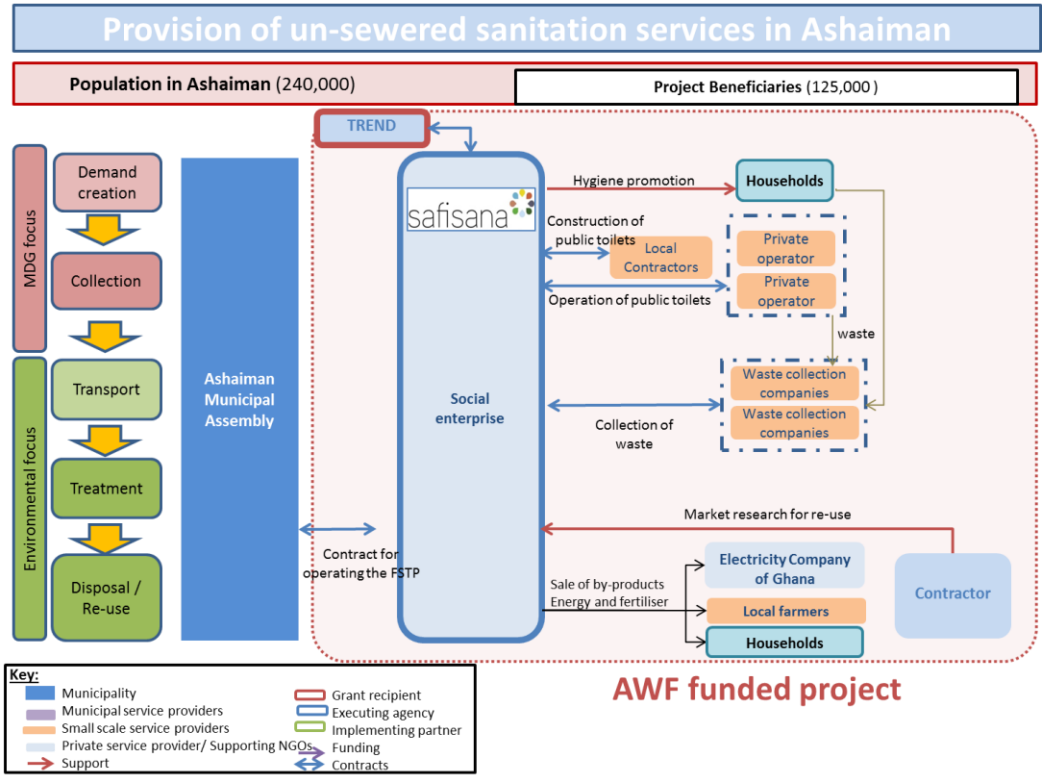
Activities financed by AWF	**Component 1**: Pilot the implementation of WASH infrastructure for service delivery in 3 urban areas. Using multi-stakeholder partnerships, the three sub-projects combined the development of infrastructure (Multi-purpose public block sanitation facilities, household latrines, bio-plant facility, Sanitation markets, drainage, solid waste transfer stations and boreholes) with piloting of new technologies and testing of innovative management and implementation approaches. This also included hygiene education. The projects in Mankessim and Huni Valley also included Revolving Fund loans to finance household latrines. **Component 2:** Improve the enabling environment for replication and scaling up of pro-poor WASH service delivery in Ghana. This included project monitoring and consolidation of lessons learned and best practices, strengthening of national networking structures, advocacy. These activities were also covered through partial funding from the NWP with Technical Assistance from IRC- Water and Sanitation Centre in the Netherlands.

Challenges to sustainability	**Strategies developed**	**Results Achieved**
Unsustainable operation and financial management of public latrines	The municipality is the owner of the public latrines and contracts their operation to private operators. The WMT is responsible for daily planning and oversight of the contractors. To support them, TREND provided hands on capacity building of MMDAs and the WMT for sustained management of the facilities.	The WMT in the three towns have experienced different levels of effectiveness. For all towns, the oversight of the WMT from the municipality needs to be improved. Continued support will be required to ensure that the management systems continue to be sustainable. The sustainability of facilities depends more on post construction support. The role of the WMTs/WSMT will be secured with funding from public latrine facilities and water. Their continued engagement with all stakeholders will be assured through the continued operation of Learning Alliances established during the project.
Limited demand for sanitation at household level	Building a sanimart and training of artisans	SaniMarts have been built; the WMT have received training with regard to promotion, and artisans have been trained to operate as contractors. Yet the household sanitation scheme has failed to take off in both Mankessim and Huni Valley. The utilisation of the SaniMart as a promotional tool has not been well managed in a structured way and thus its impact so far has been low. This has contributed to low demand for affordable latrines.
	Microfinance for household latrines and sanitation marketing through a revolving fund	The revolving fund in Mankessim has failed to launch (only 2 demands have been honoured). The main issue with trying to start a revolving fund is the inadequacy of initial seed money and the preference for pour-flush latrines, which cannot be supported with the proposed amount of credit. The WMT is to expand the scope of

Improved Sanitation and Water Supply Service Delivery to the Urban Poor in Ghana through Tripartite Partnerships, Ashaiman, Mankessim and Huni Valley (Ghana)

		financing to actively involve micro-finance groups. Revolving fund systems cannot be a stand-alone solution to the challenge of providing household sanitation. The Project Completion report (March 2014) concludes that efforts should focus on using funds for revolving funds to leverage credit from microfinance groups.
Additional benefits	• **Job creation.** Private latrine artisans and contractors have been trained to market and construct latrines in Mankessim and Huni Valley. • **Green Growth**. The project has created an enabling environment and higher priority has been given to pro-poor WASH in development planning with improved access to evidence-based information and knowledge sharing, regular sector policy dialogues on pro-poor WASH, and a structured advocacy initiative informing government and donor programmes/project. In addition, facilities have been built to support reuse: o A biogas facility has been installed in Ashaiman to ensure sustainable on-site treatment of sewage from public latrines, biomedical and bio-municipal solid waste. However, it was not in use as March 2014. o In Makessim, a few Ecosan Biofil latrines have been installed. o In Ashaiman, the "reuse of urine and treated faeces from Ecosan by farmers" component has been shifted to a new project with Safisana.	
Overall Results	The targets for sanitation coverage have been achieved in Ashaiman and Huni Valley but not in Mankessim. The shortfall in Mankessim is due to a failure of the household latrine scheme to achieve targets. A new strategy has been developed for the household scheme and is now being implemented with the support of the Municipality. Community private Operators are the key agents managing public latrines in all three pilot towns.	

Safisana, A Business Approach for Improved Sanitation– Organic Fertilisers and Energy as Drivers, Ashaiman (Ghana)

AWF grant implementation status, dates and budget	• Status: The grant agreement was signed on the 31st October 2013. The project started in April 2014 over a period of 3 years. • Budget: The total budget is EUR 1,515,500. The AWF contribution is EUR 1,084,500 (68% of total project cost). The Executing Agency – Safi Sana Ghana Limited (SSGL) – through the partners Aqua For All and the Safi Sana Foundation, are co-financing the remaining EUR 431,000 (32% of the total project costs).
Geographical scope and scale	• The project is implemented in the Ashaiman Municipal Assembly (ASHMA) • It will directly benefit 125,000 people by 2015, approximately 50% of the total population in the target municipality.
Project objectives	• The overarching goal of the project is to improve sanitation and solid waste management services in ASHMA through a demonstrated and replicable business model for FS and organic waste reuse. • The output of the project is an up-scaled faecal and solid waste treatment plant with a treatment capacity of 9,000 tons of waste per year. The project will set-up a production and sales organisation for bio-fertiliser (capacity 500 tons/per year) and electricity generated from biogas to be fed into the local grid (capacity 580,000 kWh/year). The Project will undertake the rehabilitation of three existing public toilet facilities, construct one new one and set up organic waste collection points.
Institutional and funding arrangements	• The project is being implemented by the social enterprise Safi Sana, the Executing Agency, in partnership with Training Research and Networking for Development (TREND) a local NGO, which has already executed an urban sanitation project in the same area with AWF funding (the TPP project). Thus TREND was selected as the Grant Recipient and will undertake financial administration, knowledge management and reporting functions. • The figure below describes the arrangement for service provision in Ashaiman for this project 
Activities financed by AWF	• **Component 1: Sustainable waste collection and storage** o Construction and rehabilitation of public toilets: (1 new and 3 rehabilitated public toilets); o Recruitment and training of public toilet operators; o Preparation and implementation of a multi-media hygiene promotion campaign; o Establishment and operationalisation of organic waste collection points organised through signed supplier contracts;

Safisana, A Business Approach for Improved Sanitation– Organic Fertilisers and Energy as Drivers, Ashaiman (Ghana)

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Preparation and implementation of incentive scheme for waste management

Component 2: Waste treatment & Safe Reuse

Construction and installation of waste treatment units (for the production of bio-fertiliser and biogas);
Recruitment and training of management, production and sales staff

Component 3: Preparation of market entry for bio-fertiliser and electricity

Market preparation to raise awareness of reuse products (bio–fertiliser and electricity);
Promotion and marketing of bio-fertiliser and renewable energy;
Preparation and signing of supplier contracts for bio-fertiliser and electricity.

Component 4: Project management and Knowledge management

Across the 4 components, the AWF grant will cover costs related to the hardware investment related to the waste treatment (WT) plant; market entry preparation costs; and associated consultancy services. The SSGL partners will finance the construction of one public toilet, rehabilitation of 3 existing toilets, hygiene promotion activities, project management cost, product development cost (market proof), knowledge dissemination toolkits and activities, and consultancy cost for technical support.
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<tr><td colspan="2">
<table>
<tr><th>Challenges to sustainability</th><th>Strategies developed</th></tr>
<tr><td>Weak financial viability of the FS value chain</td><td>The project’s premise is that the revenues from bio-fertiliser and biogas energy sale will cover direct sales cost and overhead costs of the production unit and office. Financial drivers will encourage quality, efficiency, innovation of management and technology. The business model enables to address the whole sanitation chain while establishing possible economies of scale through leveraging and scaling up. This project seeks to develop a blue print business model for FS reuse that can be showcased to entrepreneurs, NGOs and Municipalities. Once the economic viability of this business model is established, it is expected that further replication of the concept is possible on the basis of common financing methods.</td></tr>
<tr><td>No incentives to dispose waste at the treatment plant</td><td>The collection of ‘high quality’ waste is one of the critical success factors of the model. Thus the project includes the preparation and implementation of incentive schemes for waste management. Emptying fees for the public toilet operators and dumping fees for the waste transport companies that are responsible for the supply of quality waste will be discounted to incentivise discharge (up to 15% discount).</td></tr>
<tr><td>Bio-fertiliser is not accepted by the farmers and sales of reuse products are lower than expected</td><td>This is a critical aspect of the project as the acceptability of reuse products is deemed to be low in Ghana. To enhance market entry and sales, the project has built an inter-sectoral collaboration between SSGL, the relevant government actors (Sanitation, Energy, and Agriculture) and the Ashaiman Municipal Assembly (ASHMA).

The Ministry of Food and Agriculture (MOFA) will inspect the production units to ensure conformity with required fertiliser nutrients and ensure safety in reuse before providing necessary certification of the bio-fertiliser application. MOFA will also offer the services of its Extension Officers to support advocacy (information sharing, demonstrations and training of farmers).
The Ministry of Energy (MOE) through its institutions, the Energy Commission and PURC (regulator), will support the process for the application of the ‘Preferential tariff’ and in so doing help operationalise the renewables energy Act regarding installation and supply. TREND will prepare communication materials and multi-media products to market products to end-users.
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<tr><td>Additional benefits</td><td>Job creation. The project will create jobs for public toilet operators and waste collectors.
Green Growth. Composting Faecal and organic waste will lead to reductions in accumulated waste by almost 80%. It will reduce pollution and methane emissions from accumulated and untreated waste. Reuse of FS will diminish the use of artificial fertilisers, reducing significant amounts of (indirect) CO2 emissions.</td></tr>
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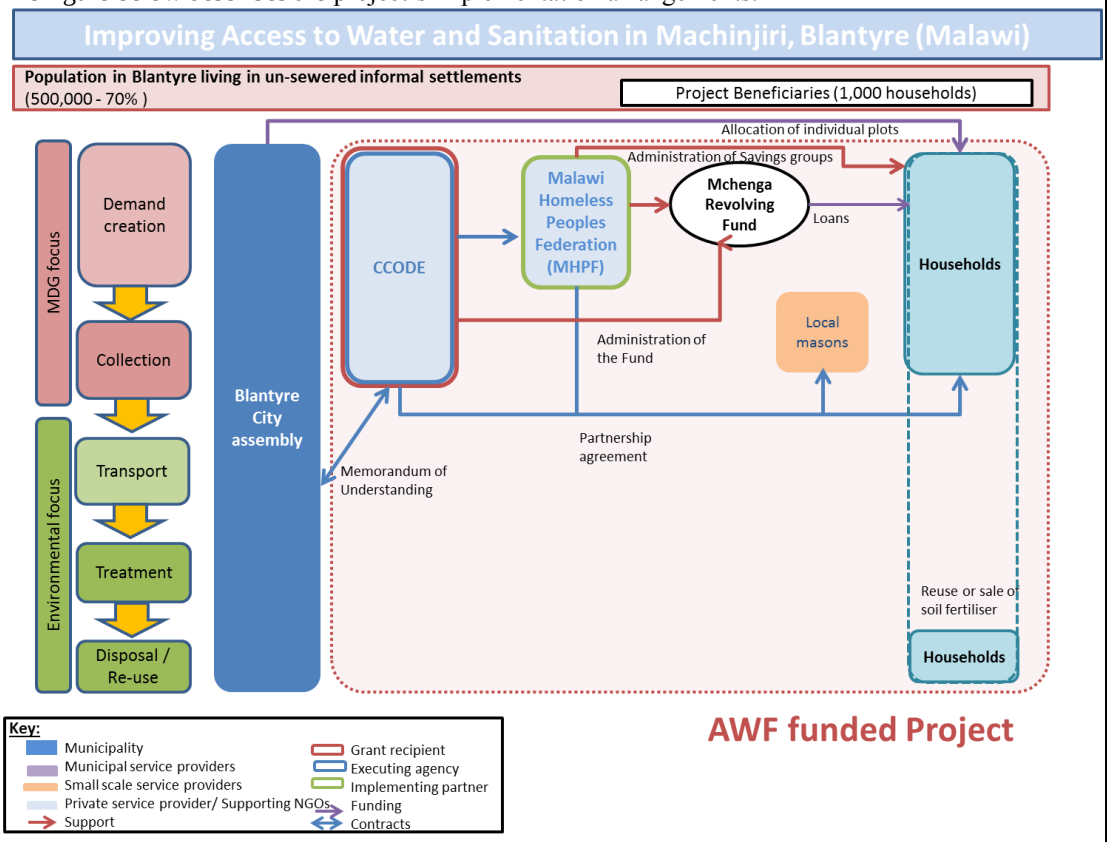
Improving Access to Water and Sanitation in Machinjiri, CCODE, Blantyre (Malawi)

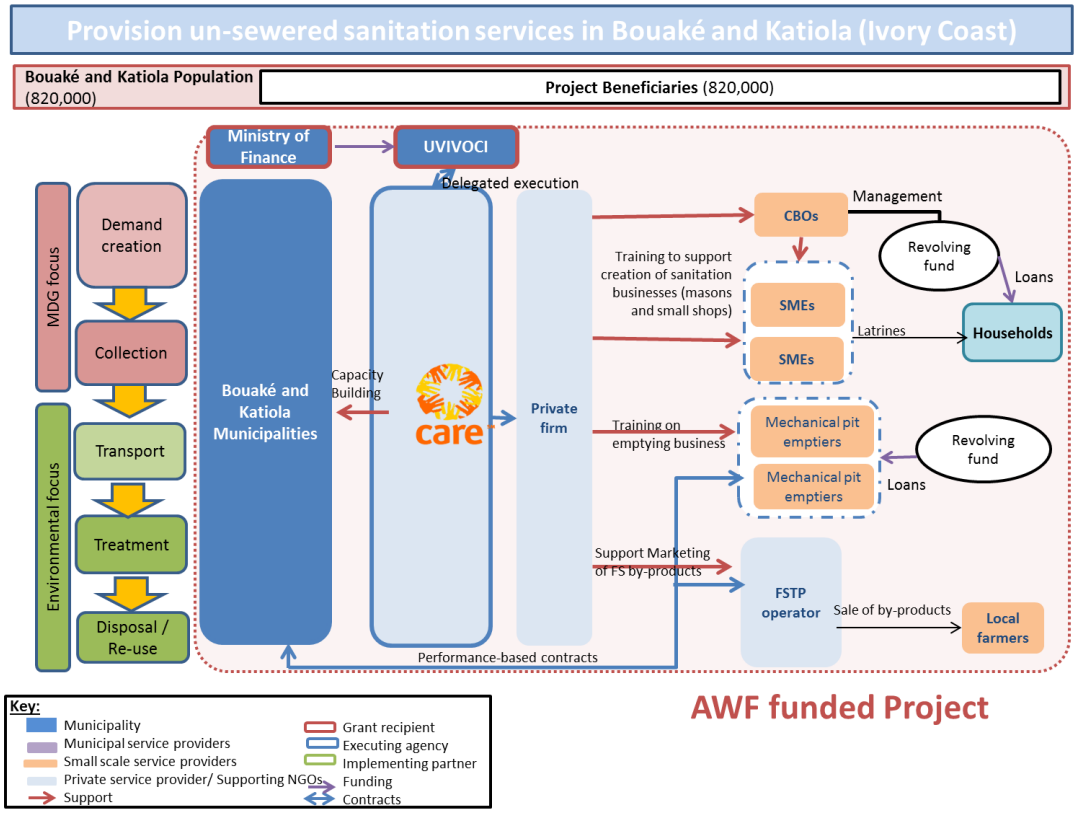
AWF grant implementation status, dates and budget	• Status: AWF funding was granted in 2009 for 36 months. The project will be completed in 2014. • Budget: The total project budget was EUR 810,000, including EUR 610,000 AWF grant (75% of total budget), EUR 44,572 from CCODE and EUR 159,536 from beneficiaries.
Geographical scope and scale	• The project was located in Machinjiri, a new neighbourhood in Blantyre. • At design stage, the project aimed to benefit 1,000 households with 1,000 Ecosan facilities at household level and 1,000 households connections to the city water supply network.
Project objectives	The project aimed at equipping households with Ecosan facilities through the use of microcredit.
Institutional and funding arrangements	The NGO Centre for Community Organisation and Development (CCODE) leads the project. CCODE voices Blantyre's poor concerns to Blantyre City Assembly (the municipality) (BCA). The NGO has partnered with Malawi Homeless People's Federation (MHPF) in 2003 and is a partner of Homeless International (and its CLIFF programme). CCODE and MHPF created in 2006 the Mchenga Revolving Fund, a formal microcredit revolving fund dedicated to the construction of affordable housing, comprising sanitation facilities and a connection to piped water. In 2009, BCA offered 15 hectares of land for the construction of 500 new homes under the management of CCODE. The construction of these houses was financed through loans from the Mchenga Revolving Fund. The figure below describes the project's implementation arrangements: 
Activities financed by AWF	The AWF contributed to the construction of Ecosan toilets for new homes and 500 existing houses in low-income areas of Blantyre. This was done through creating a new water and sanitation revolving fund based on the Mchenga model for housing improvement and through financing the following activities (through CCODE): • Design of the bathroom and toilet (Ecosan) toilets; • Training of local builders on the construction and maintenance of Ecosan; • Administration of the revolving fund (including selection of beneficiaries); • Community mobilisation and training on Ecosan. The bulk of the AWF grant (EUR 396,218) was administered as revolving loans under a Special Fund for water and sanitation investments for the urban poor. Another EUR 94,042 was used to finance CCODE's community mobilisation activities and EUR 75,287 fed into project management. EUR 45,244 were allocated by the AWF for physical and price contingencies.

Improving Access to Water and Sanitation in Machinjiri, CCODE, Blantyre (Malawi)

Challenges to sustainability	Strategies developed
Lack of adequate housing	Construction of new developments with allocated space for sanitation facilities
Absence of developed and affordable emptying services	Adoption of UDDT technology, which minimises emptying
Unfamiliarity with Ecosan toilets	Training in using Ecosan facilities and managing the generated waste
Inability to afford upfront costs for Ecosan facilities	Setting up a revolving fund to facilitate access to finance
Difficulties with loans repayments	Assistance through a "skills and livelihoods" training programme to improve chances of loan repayments; provision of loans as group loans to enforce peer pressure for loan repayments

Additional benefits	• **Green growth:** The project promoted Ecosan facilities, which encourage the reuse of urine and dry feces as soil fertiliser. It proves to reduce watering needs and damages to the environment caused by artificial fertilisers. • **Inclusive considerations**: In selecting beneficiaries, CCODE privileged vulnerable families and provided training via "Skills and livelihood Programme" to those families to increase chances of repayment.
Overall results	The initial project aimed at providing Ecosan in newly built housing development. However, as construction has been slow to progress, the project focused on Low Income Areas. A total of 581 facilities had been constructed by March 2014. While repayment for water connections are ahead of schedule, some delays have been encountered on sanitation loans. Corrective measures have been recommended in the mid-term review and are being implemented**.**

Promotion of access to toilets and job creation through reuse of faecal sludge, Bouaké and Katiola (Ivory Coast)

AWF grant implementation status, dates and budget	• Status: the project was approved by AWF in September 2013. The grant agreement is signed in June 2014 and implementation should start in the 2nd semester 2014. It is expected to last for 3 years. • Budget: The total project budget is EUR 1,529,378 with a EUR 1,250,000 grant from AWF (82% of total project budget), a EUR 52,500 contribution from Bouaké and Katiola municipalities and an anticipated EUR 226,878 contribution from households.
Geographical scope and scale	• The project targets the small cities of Bouaké and Katiola (resp. 753,000 and 68,000 inhabitants). It is anticipated that the entire 810,000 population of Bouaké and Katiola will benefit from the project. Projects will be prepared for the cities of Korhogo, Sinématiali, Daloa, Vavoua, Man, and Bangolo.
Project objectives	The objectives of the project are to: • Increase access to safe, sustainable and affordable sanitation services for the population; • Implement an effective, efficient and sustainable business-led FS management system with production of affordable fertiliser with urine and FS.
Institutional and funding arrangements	The international NGO CARE is the executing agency. This project builds on a pilot project implemented in Katiola by CREPA (now WSA), which demonstrated that linking sanitation with agriculture through the reuse of faecal sludge contributed to promoting access to sanitation, job creation, and improved revenues from agriculture (among other benefits). The *Union des Villes et Communes de Côte d'Ivoire* (UVICOCI) submitted a proposal to AWF to scale up the Katiola pilot, with CARE International acting as executing and implementing partner. CARE has been working in Bouaké and conducted pilot projects on community management of solid waste. It will recruit a private firm for engineering studies, training, marketing and supervision. CARE will then manage contracts and report to UVICOCI and the Government. The Ministry of Economy and Finance is the AWF grant recipient. The figure below describes the arrangement for providing sanitation services. 
Activities financed by AWF	**Component 1: Promote access to toilets** • Development of sanitation strategies for the towns of Bouaké and Katiola to support households accessing improved sanitation: institutional responsibilities, microfinance structure to help households financing the facilities' superstructure, marketing and sanitation promotion

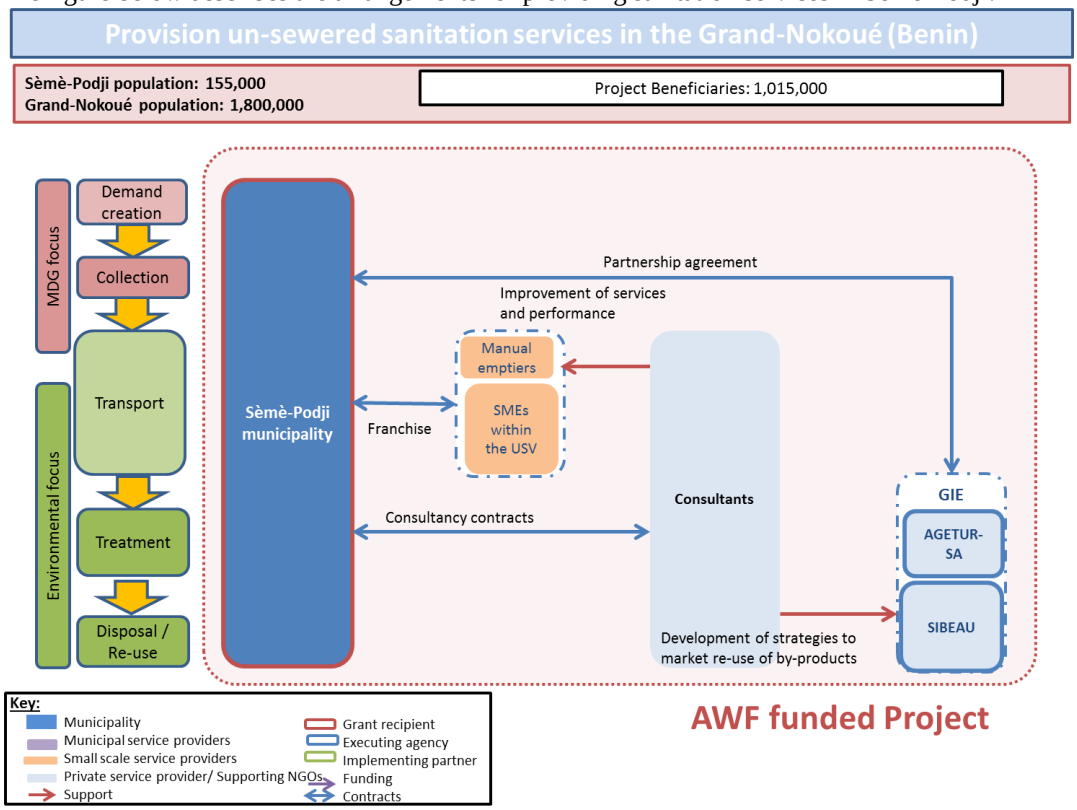
Promotion of access to toilets and job creation through reuse of faecal sludge, Bouaké and Katiola (Ivory Coast)

	to mobilise communities. • Construction of 900 urine-diverting facilities (benefiting directly 9,000 households). • Support to CBOs in creating SMEs to promote access to sanitation services, from collection to reuse/sale of by-products through developing marketing strategies. SMEs will also be supported in accessing microfinance for developing their activities • Setting up a microfinance mechanism to provide micro credits households to get access to toilets. **Component 2: Integrated provision of FS emptying and transport services** • Conducting a study to determine contractual arrangements between municipalities and service providers for sustainable services along the sanitation value chain. • Building capacity of Municipal technical services on faecal sludge management • Building capacity of mechanical emptiers so that they enter into performance-based contractual arrangements with the municipalities • Training and capacity building of small emptying and transport businesses on technical and hygienic aspects and equipment with appropriate materials (plastic containers to for collecting urines, wheelbarrows, clothing equipment, etc.). A revolving fund will be set up to provide them with initial capital to finance their operations in the first 6 months (until revenues from the sale of by-products are generated). **Component 3: FS Treatment and reuse** • Conducting studies in relation to treatment and reuse of by-products. • Construction of FSTPs and Support to the FSTP operators in the first 3 months after construction. **Component 4: Project management and knowledge sharing**

Challenges to sustainability	**Strategies developed**
Lack of demand for adequate sanitation	Communication strategies to develop take-off in demand for sanitation products, including through building capacity of small businesses with support from CBOs to develop marketing strategies Studies to determine the most appropriate modalities to promote the uptake of sanitation services (including emptying)
Lack of demand for sanitation by-products as fertiliser	Marketing strategies will be put in place to promote the reuse of faecal sludge
Lack of skills and knowledge of micro service providers	Training of women and youth in sanitation businesses (including emptying)
Lack of access to finance for households and SMEs	Access to credit facilitated to households (although it is unclear how this credit facility will operate: which institution will operate it, what will be the repayment modalities and interest rates, if any, etc. A private company will be recruited to develop modalities). Access to finance will also be facilitated for SMEs involved in building latrines and small emptying business through the setting up of a revolving fund.
Absence of regulation for emptying businesses	Emptying businesses (including mechanical emptiers) will enter into performance-based agreements with the municipalities to ensure quality of services.
Lack of capacity and technical knowledge among municipalities staff	Training of municipalities staff on all aspects of access to latrines and faecal sludge management

Additional benefits	• **Job creation**: The project will support the creation of 12 micro-enterprises employing at least 60 persons. • **Green growth**: the project aims at creating a lasting link between sanitation and agriculture through the sale of faecal sludge by-products as a fertiliser from cultivation purposes. Reuse of urine and faecal sludge should help reduce irrigation needs due to improvement in soil quality. • **Gender issues**: the project seeks to support women (and youth) in accessing long term employment and skills

Improving the management of faecal sludge in the Grand-Nokoué (Bénin)

AWF grant implementation status, dates and budget	• The AWF grant was signed in June 2013 and is expected to last 36 months. • Budget: the overall project budget is USD 5,351,400 and the AWF grant amount is USD 1,110,300 (21% of total budget)
Geographical scope and scale	• Scope: The project is implemented in Sèmè-Podji and surrounding villages (155,000 inhabitants) and Grand-Nokoué (1,800,000 inhabitants) • Scale: It expects to reach a total of 1,015,000 beneficiaries (155,000 in Sèmè-Podji (100%) and 860,000 in Grand-Nokoué (47%))
Project objectives	The objective of the project is to improve collection and transport services for the town of Sèmè-Podji and surrounding villages through strategies to strengthen the private sector (responding better to customers' preferences and improving operational performance of private operators). The project also looks at improving treatment services and developing strategies for marketing treated by-products.
Institutional and financing arrangements	The municipality of Sèmè-Podji is implementing the project. The Bénin government has been encouraging private sector participation in the management of faecal sludge since the 1990s. In 2012, there were about 45 formal SMEs involved in the emptying business in the region. These SMEs, which operate 73 trucks, have formed a syndicate (*Union de Spécialistes de la Vidange* (USV). The municipality perceives charges from each truck that discharge the sludge in the FSTP. In 2011, the Sèmè-Podji municipality applied for the AWF grant and partnered with two private companies, SIBEAU (owner and operator of the FSTP) and AGETUR-SA in a bid to improve services to the Grand-Nokoué population and rehabilitate Ekpè FSTP, the only one in the Grand-Nokoué region (this region includes the capital Cotonou). Both private operators formed a partnership (*Groupement d'Intérêt Economique* - GIE), which is providing initial investment in the rehabilitation of the FSTP. The figure below describes the arrangements for providing sanitation services in Sèmè-Podji. 
Activities financed by AWF	• Consultants are to be hired to conduct studies on: - How to improve collection and transport of sludge (within the Grand-Nokoué region): measures to reduce costs, diagnostic of the USV (with plans on how to reinforce its capacities in terms of organisation, equipment and management), diagnostic of the management of Ecosan facilities constructed with support from CREPA and measures for

Improving the management of faecal sludge in the Grand-Nokoué (Bénin)

<table>
<tr><td></td><td>improvements;
- Improving the design of the FSTP with a focus on climate resilience, and flooding in particular and developing marketing strategies for faecal sludge by-products;
- the number of manual emptiers, to assess the current state of this market.
• Following these studies, both manual and mechanical emptiers should receive training to improve their services. USV organisational, legal, financial and administrative capacities will be reinforced. USV members will also be equipped with management tools such as routing tools
• The private companies will finance the rehabilitation of the FSTP.</td></tr>
<tr><td colspan="2"><table>
<tr><th>Challenges to sustainability</th><th>Strategies developed</th></tr>
<tr><td>Households cannot afford services</td><td>Seeking economies in delivering services along the sanitation value chain: reducing costs of emptying (through improving performance of private operators via for example, the use of management tools) and treatment (through finding ways to make the sale of FS by-products profitable)</td></tr>
<tr><td>Little uptake in reuse of sanitation by-products</td><td>Marketing plans for diffusing the use of FS treatment as compost (including through mass media)</td></tr>
<tr><td>High transport costs for emptiers jeopardise their performance</td><td>Strengthening the organisation of mechanical emptiers through management training and reducing transport costs</td></tr>
<tr><td>Poor financial viability of FS treatment – Deposit fees do not cover rehabilitation of the FSTP and the company is dependent on deposit</td><td>User charges increase periodically to cover O&M costs.
The project will be investigating ways to make sanitation businesses more profitable through FS treatment and reuse.</td></tr>
</table></td></tr>
<tr><td>Additional benefits</td><td>• Environmental considerations: the damage caused to the environment by the rejection of untreated sludge into the sea was a major driver of this project. The works at Epkè which will augment the treatment capacity should stop this harmful practice.
• Green growth: the project will develop strategies for the marketing of treated by-products as fertiliser in a bid to reduce the costs of faecal sludge management along the value chain.
• Gender consideration: The project does not focus particularly on gender inclusion, although it does mention that businesses governed by women will be included.</td></tr>
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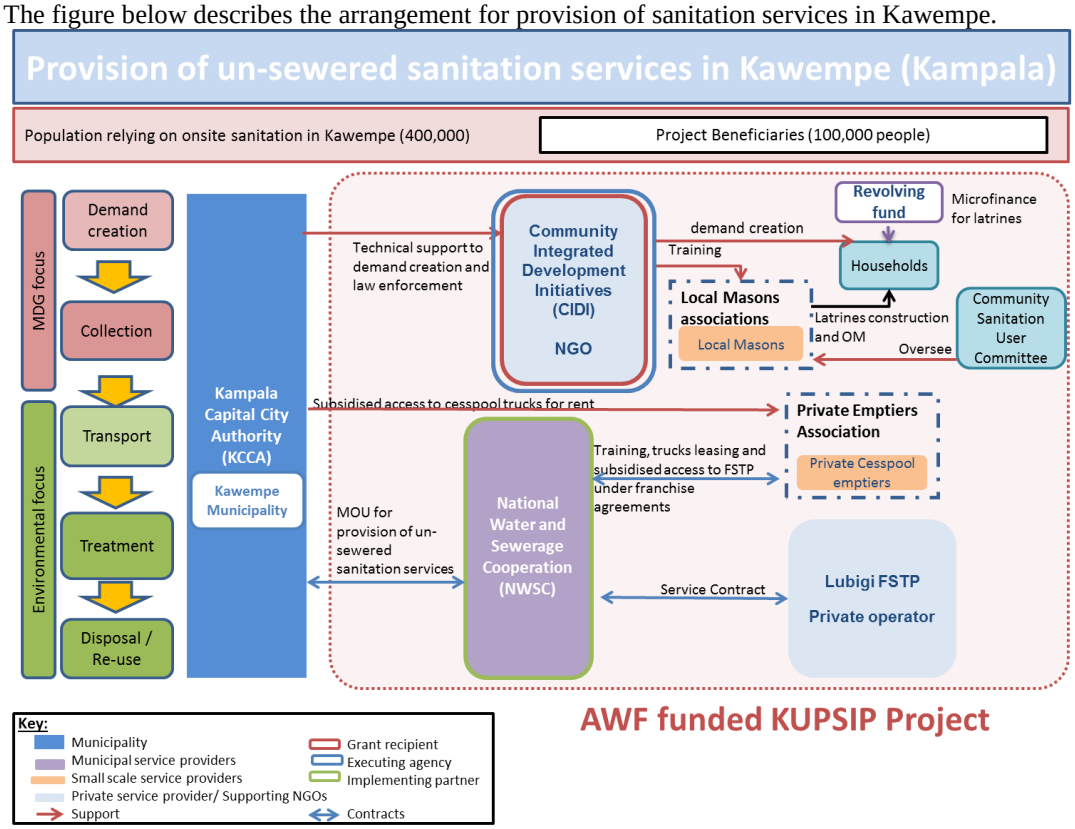
Kawempe Urban Poor Sanitation Improvement Project (KUPSIP), Kampala (Uganda)

AWF grant implementation status, dates and budget	• The project agreement with AWF was signed in December 2012. The implementation started in 2013 a duration of 3 years. • The total cost of the project is estimated at € 1,352,460. AWF grant will provide 73.9% of the total project costs (€ 1,000,080), while CIDI and collaborating partners shall co-finance 26.1% of total project costs (€ 352,380) through financial and in-kind contributions.
Geographical scope and scale	• The project is being implemented in Kawempe, a division of the city of Kampala with 400,000 inhabitants. • The project targets 100,000 primary beneficiaries. Further uptake through the community-based revolving-fund mechanism and through hygiene education promotion, during and after the project, is expected to double the beneficiary population to approximately 200,000 people.
Project objectives	• The objectives of the project are to: ○ Provide sanitation facilities for households, schools and the public or urban poor areas and promote principles of sanitation marketing; ○ Develop strategies, information, education and communication tools to promote sanitation demand and promote better sanitation practices; ○ Define a sustainable faecal sludge management and safe reuse strategy.
Institutional and funding arrangements	• The local NGO Community Integrated Development Initiatives (CIDI) is leading the project. • The KUPSIP project is executed by CIDI, in partnership with Kawempe Municipality of the Kampala Capital City Authority (KCCA) and the National Water and Sewerage Cooperation (NWSC). • CIDI is responsible for promoting sanitation marketing, establishing a sanitation revolving fund and training local masons, and NWSC will train and lease trucks to cesspit emptiers under a franchise agreement. The private operator manages the treatment of FS. The figure below describes the arrangement for provision of sanitation services in Kawempe. 
Activities financed by AWF	The AWF is funding 4 components: • **Component1:** Provide affordable and sustainable sanitation infrastructure for 100,000 urban poor residents with 240 public sanitation facilities and 1,580 household sanitation units, and offer community-based micro-credit schemes for poor households to afford latrines, through a revolving fund. • **Component 2:** Promote improved hygienic and environmental sanitation practices among 200,000 Kawempe urban poor residents.

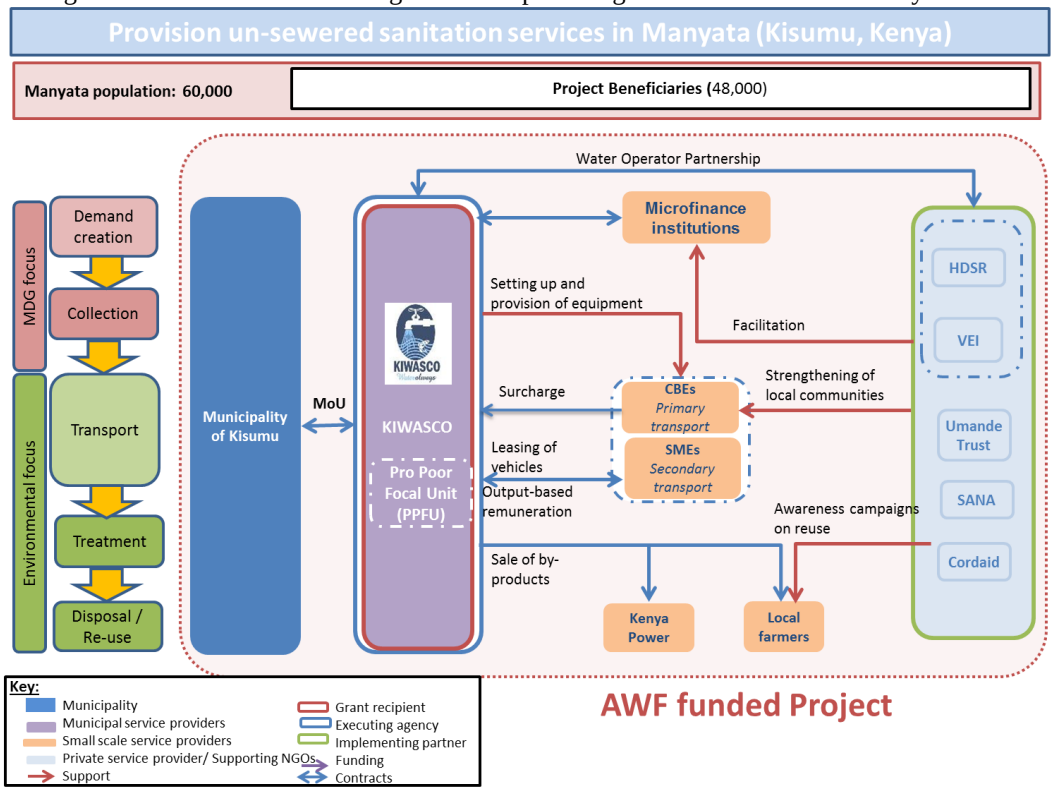
Kawempe Urban Poor Sanitation Improvement Project (KUPSIP), Kampala (Uganda)

	• **Component 3:** Define and operationalise up-scalable faecal sludge management systems for the urban poor (collection, transportation, treatment and reuse) • **Component 4:** Management, learning and sharing

Challenges to sustainability	Strategies developed
• Limited prioritisation of sanitation by urban poor and landlords ("I rent a house not a toilet") • The transient nature of the urban population limits the community peer pressure for behavioural change (80,000 people come to Kawempe every day and about 500 new tenants daily). • Limited enforcement of sanitation standards by urban authorities at present	• The project proposes a combination of a sustained creation of demand for sanitation through close and regular contacts between the communities and CIDI and use of diverse communication material to raise awareness and prolong the IEC component of the project. • The project works closely with KCCA to implement an integrated sanitation marketing component, with a "stick and carrot approach". KCCA has committed to enforce laws related to sanitation.
• Extreme poverty among the urban poor despite their willingness to pay for the services	• CIDI will set up a community-based Revolving Fund that will provide micro-loans to households to support financing sanitation facilities. CIDI has long-standing experience in implementing community-based micro-credit schemes for economic activities, and for water supply and sanitation. The financing mechanism will entail minimal interest rates to cater for the costs of administering the Fund.
• The transient nature of the urban population limits operation and maintenance of public facilities.	• This project will establish community clubs and O&M/ sanitation user committees to improve their functionality to 90%. User committees will be responsible for managing and overseeing the activities of the masons and ensure application of a sustainable O&M system for public facilities.
• Limited and untapped involvement of the private sector in FS management	• The project proposes an innovative faecal sludge collection and transportation model in which NWSC leases trucks to small private operators under a franchise agreement. • As NWSC will be involved in a new FSM operational and management mechanism (for with this project is a pilot), the municipality has committed to apply this system at scale to provide emptying and transport services to the un-sewered urban areas of Kampala.

Additional benefits	**Job creation.** The project will create job opportunities and training for masons in the local community and will develop local businesses for collection and transport of FS. **Green Growth.** Collection and treatment of FS will reduce pollution of both surface and underground water and the methane emissions from accumulated and untreated faecal sludge. The faecal waste that will be generated shall be safely contained, collected and transported to the Lubigi faecal sludge treatment plant. Possibilities for using stabilised sludge or bio-solid products will be explored. Reuse of FS will diminish the use of artificial fertilisers, reducing significant amounts of (indirect) CO2 emissions. **Gender mainstreaming.** At least 30% of local community masons trained will be women, and all committees will have at least 30% women/ girl child representation both at the school management committees, user-committees the hygiene and sanitation clubs and the operation and maintenance committees. The project will also design gender sensitive facilities that are tailored for the special needs of women and children, and with separate units for women and girls.

Innovative Sanitation Value Chain for the Un-sewered Urban Poor in Manyatta, Kisumu (Kenya)

AWF grant implementation status, dates and budget	• The project appraisal report is still under review but expected to be approved in June 2014. It is anticipated to last for 3 years. • The total project budget is EUR 2,152,000. The AWF grant will contribute EUR 1,204,000 (56% of the total project cost). The remaining will be funded by KIWASCO, a parastatal water utility affiliated to Kisumu Municipality, and collaborating partners.
Geographical scope and scale	• The project will be implemented in the informal settlement of Manyatta (60,000 inhabitants) within Kisumu (the third largest city of Kenya). • Initial direct beneficiaries are 48,000 urban poor inhabitants living in Manyatta (the project plans to scale up at a later stage to reach all 240,000 living in Kisumu.
Project objectives	• The objective of the project is to provide sustainable access to sanitation to Manyatta's population through developing PPP arrangements along the sanitation value chain.
Institutional and financing arrangements	• Kisumu Water and Sewerage Company (KIWASCO) is leading the project. • The project is part of a wider Water Operators Partnership (WOP) initiative aimed at reinforcing KIWASCO's capacity to serve poor settlements. KIWASCO has entered into this WOP with Vitens Evides International, a Dutch water operator. Together with NGOs SANA and Cordaid, VEI will support the formation and strengthening of community-based enterprises (CBEs) and small enterprises (SMEs). KIWASCO has established a dedicated Pro Poor Focal Unit (PPFU) tasked to provide improved water and sanitation services for the urban poor through delegated management contracts with private operators. VEI and HDSR, a Dutch regional water authority, are providing technical assistance to the PPFU and supporting the development of PPPs. • KIWASCO and the Municipal Council of Kisumu (MCK) have concluded a Memorandum of Understanding mandating KIWASCO to provide sanitation related services in un-sewered informal settlements in Kisumu. The figure below describes the arrangements for providing sanitation services in Manyatta. 
Activities financed by AWF	AWF will mainly support major investments in collection, treatment and reuse along the sanitation value chain and activities for capacity building, up scaling, knowledge management, project management, and. These will include: **Component 1: Improve Hygiene Awareness and Access to Household Sanitation Services** • Hygiene and sanitation promotion campaign: constructing sanitation facilities in schools, carrying out IEC among residents, sanitation marketing (with focus on promoting different options

for locally available toilets), supporting the development of microcredit for sanitation among local microfinance institutions and monitoring of behavioural change,

- Improving collection: feasibility studies, demonstration toilets to support sanitation marketing and promotion of microfinance, establishment of new companies to sell latrines,
- Setting up sanitation micro credit for households: contracts with selected microfinance institutions (KIWASCO is already involved with K-Rep Bank for financing water connections; other banks include Equity Bank and Family Bank). Local banks/cooperatives will also be encouraged to set up a "microcredit fund" for Kisumu residents to purchase sanitation facilities or rehabilitate existing.

Component 2: Faecal sludge collection and transport services

- Establishing primary collection services: purchase of collection containers and construction of 3 transfer stations, establishment of primary collection of FS through (CBEs), financing of CBEs' operations during the first 2 years (CBEs will pay a surcharge to KIWASCO during the 3rd year),
- Outsourcing of secondary transport through competitively contracted truck operators – these operators will also manage the transfer stations, renting of trucks, setting up of output-based contracts with operators (i.e. based on volumes of FS and urine collected).

Component 3: Improving FS treatment of reuse

- Construction of FSTP at KIWASCO treatment plant site, construction of sludge drying and composting unit, of an anaerobic digester to produce biogas and electricity, urine tanks;
- Capacity of building of plant operator, KIWASCO, to ensure operational performance;
- Promoting agricultural reuse: demonstration projects, dialogue with concerned Ministry, establishment of FS user association.

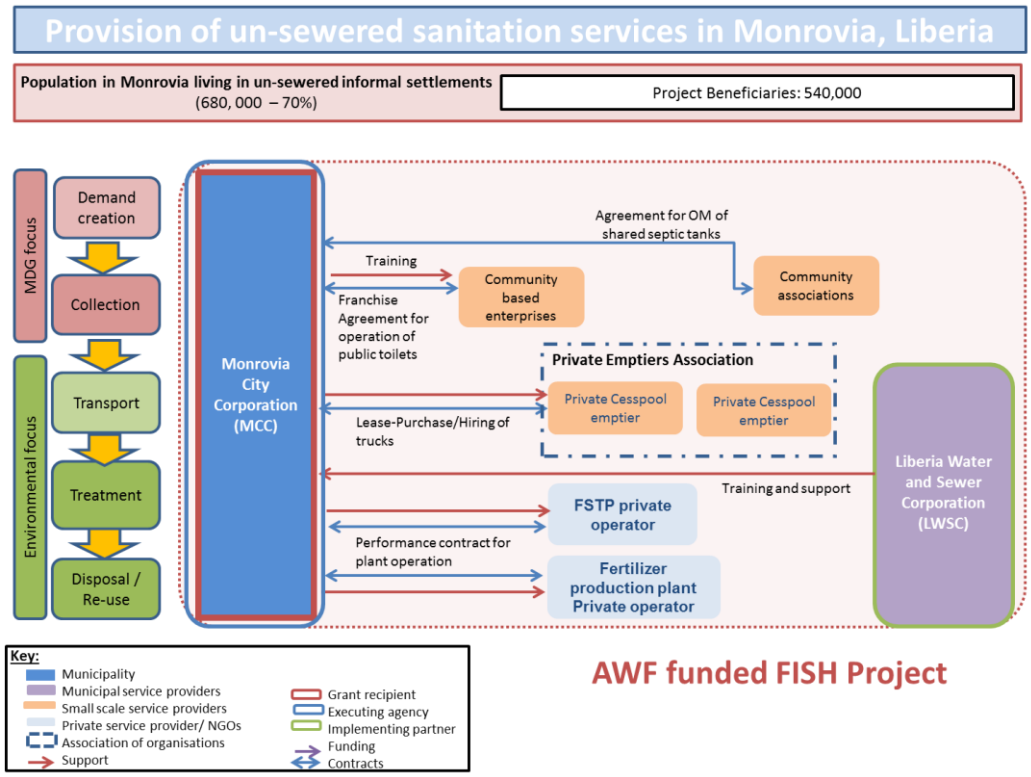
Component 4: Project and Knowledge Management

Challenges to sustainability	Strategies developed
Lack of demand	Concerted demand creation strategies through interventions in schools, via IEC directly targeting residents and sanitation marketing (with focus on promoting options for sanitation facilities) and promotion of microcredit for sanitation
Lack of penetration of KIWASCO within settlements	Collaboration with NGOs and community-based associations to form CBEs that will be in charge of primary transport
Lack of emptying services	Procurement of material and training of CBEs, formalisation of faecal sludge emptiers through creation of association, financial support in the first two years of the project; training of faecal sludge secondary transport (including on O&M and management skills), remuneration based on volumes of FS and urine collected to incentivise performance
Lack of financial capacity to extend services to settlements	Kiwasco intends to generate additional revenue to support delivery of sanitation services based on tariff increase (surtax) on drinking water (of 20 Kshs / m3).
High operating costs	Establishment of primary and secondary transport services and construction of transfer stations to limit transport costs for CBEs; Operators' revenues will be cross-subsidised with accrued savings from the sale of the FS end products (electricity and biogas).
High cost vehicles for emptying	Acquisition by KIWASCO of trucks that are then leased to operators.
Little "know-how" in approaches for reuse	Collaboration with the Ministry of Agriculture, certification of by-products with relevant authorities and intensive marketing approach, setting up of FS user association to control quality
KIWASCO's lack of capacity to manage the complexity of onsite sanitation and collaborate with a range of institutions (SMEs, NGOs, MFIs)	Technical assistance via a WOP

Additional benefits

Job creation: It is expected that each activity along the value chain will create up to 10 new jobs.
Climate change mitigation and green growth: This project aims at collecting and digesting faecal sludge along with controlled capture of biogas to produce reusable products. This will reduce methane emissions caused by accumulated and untreated faecal sludge. The biogas will serve as a source of energy to reduce the electricity bill of the utility. In addition, using FS and urine fertiliser will diminish use of artificial fertilisers, reducing significant amounts of (indirect) CO2 emissions.
Gender consideration: Women will be selected and trained to sell toilets.

Fostering Innovative Sanitation and Hygiene in Monrovia (Liberia)

AWF grant implementation status, dates and budget	• Status: The grant agreement with AWF was signed on 20th March 2013, and the project commenced in April 2013 for a total duration of 30th months. Budget: The total budget is EUR 1,387,779. The AWF will co-finance the project along with the grant recipient Monrovia City Corporation (MCC) and beneficiaries. The AWF will contribute EUR 1,200,000 (86.5% of the total project cost). MCC and the beneficiaries will collectively contribute the remaining € 187,779.
Geographical scope and scale	• Scope: The project targets Monrovia, the capital city of Liberia, which has a population of 1 million. • Scale: It will benefit 540,000 poor urban dwellers in informal settlements in Monrovia, which account for 70% of the city's population living in informal settlements (680,000 people).
Project objectives	The objectives of the project are to: • Increase access to safe, sustainable and affordable sanitation services for Monrovia's urban poor, through a community driven innovative approach; • Implement an effective, efficient and sustainable FS management system with production of affordable FS fertiliser to increase food security that is scalable.
Institutional and funding arrangements	• The project is being executed by Monrovia City Corporation (the municipality), which is also the Grant recipient. • The Liberia Water and Sewer Corporation (LWSC) is an Implementing partner. It supports the municipality with transport and treatment of FS. The Municipality will contract Community Based Enterprises (CBEs) to manage the newly built and rehabilitated public toilet facilities, and private operators to operate the FS treatment and fertiliser processing plants. The MCC will establish a private emptiers association and provide a rental truck to the private cesspool emptiers. • The figure below describes the arrangement for providing sanitation services in Monrovia. 
Activities financed by AWF	• **Component 1: Construction and rehabilitation of sanitation infrastructure**: o Construction of four new public toilet facilities and rehabilitation of eight existing ones; o Construction and community management of 22 shared domestic septic tanks; o Selection and training of (a) Community o Based Enterprises (CBEs) to manage operation of the public toilets, (b) Community Management Teams (CMTs) to monitor performance of the CBEs, and (c) the private sector to properly construct the shared septic tanks and contribute to enhance local capacity. • **Component 2: Faecal Sludge (FS) collection and treatment** o Leasing of a cesspool emptying truck and two vacutugs to private emptiers to increase capacity for FS collection, and construction of a treatment facility to optimise treatment of FS collected within Monrovia;

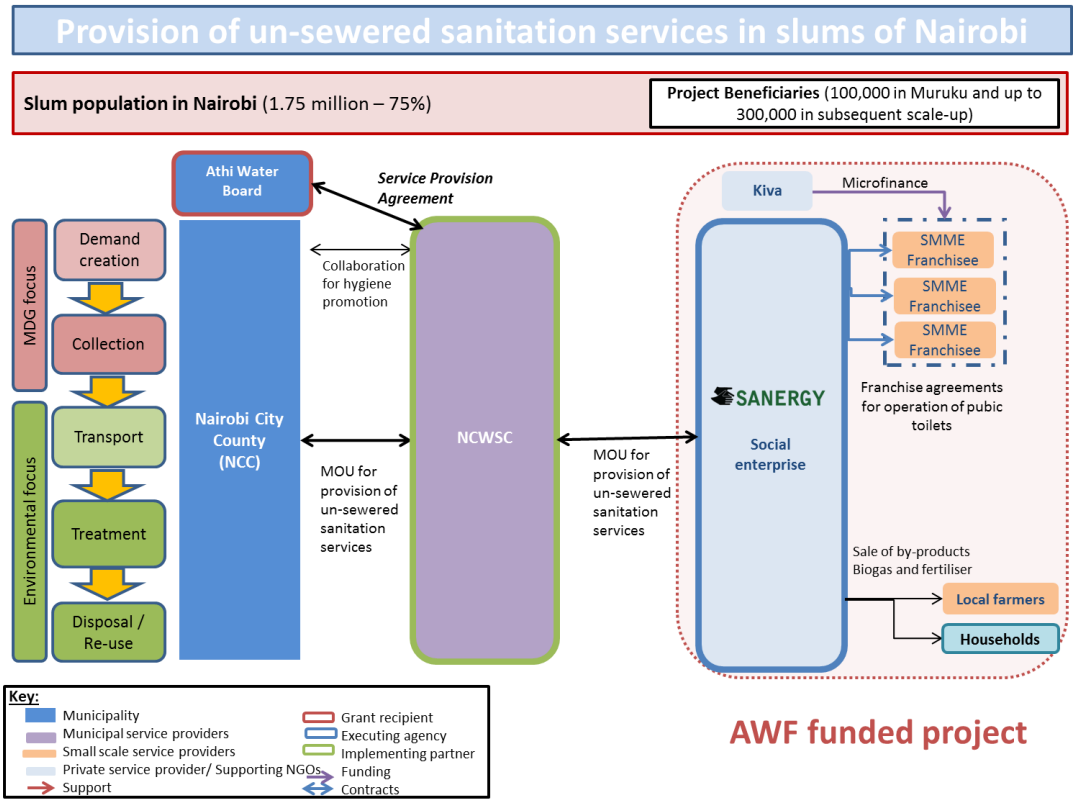
Fostering Innovative Sanitation and Hygiene in Monrovia (Liberia)

	○ Organisation of an association of private emptiers; ○ Construction of a FSTP and fertiliser processing plant: ○ Establishment of a PPP for FS collection and treatment for O & M of the FSTP, along with staff training; • **Component 3: FS Reuse** ○ Construction of a processing facility for FS fertiliser production, ○ Development of a marketing and sales strategy, establishment of demonstration farms and FS user association, and outsourcing of marketing and sales to a private company for effective reuse.

Challenges to sustainability	Strategies developed
Limited availability of qualified private companies to build and operate the infrastructure built	Selected private operators will be trained through technical assistance provided under the project. This needs to be done for the operators of the public facilities, FSTP and fertiliser production plant.
Lack of capacity of CBEs to manage public facilities	The project aims to develop a PPP Franchise model with Community Based Enterprises to manage of public sanitation facilities and entry of private sector into sanitation markets. The charging of user fees will ensure long-term availability of skilled labour and will provide financial resources for sustainable operation and use of the Toilet Facilities. CBEs will be monitored by trained Community Management Teams (CMT) (comprising community leaders and members - women, youth, men).
Low demand for latrines from households	The MCC, acting through its Environmental Health Department, will be responsible for promoting hygiene awareness in collaboration with the MOHSW. Project funds will not be used to support this activity. However the PAD does not specify how this software component will be implemented. In the absence of a strong software component, the project is at risk of not delivering the expected behavioural change.
Low demand from households and absence of enforcement of sanitation standards	Trained personnel of the MCC's Waste, Environmental Health, and Sanitation Departments will collaborate to perform regular community sanitary inspections and issue penalties, where necessary, to ensure compliance with public health and environmental sanitation regulations and ordinances.
Low affordability of access fee of public facilities to households	The user fee of EUR 0.04 charged for using public toilets is based on the prevailing amount charged for use of such facilities in other areas and was validated by a willingness to pay study conducted in the target slum areas. Mechanisms that include monthly upfront payment of user fees by households at discounted rates could be explored to further ensure affordability and to increase use of the facilities.
Weak financial viability of FS value chain	It is hoped that the development of FS reuse will generate revenues from selling fertilisers, in order to cover part of the costs of operation and maintenance costs for the FS treatment and processing facilities.
High transport costs because of the distance to the actual TP	A FSTP has been constructed in Whein Town to try and cut down on distances to the disposal point. However, there is still considerable distance and additional facilities may need to be built in the future.
Lack of support and buy-in by regulatory agencies leading to unsuccessful implementation and wider uptake	The project is actively supported by the Liberia WASH Consortium, which ensures sector coordination and alignment. They will support lobbying, advocacy, dialogue and transparency among actors to gain buy-in form regulatory agencies
Weak capacity and knowledge on FSM of the municipality	The LWSC will provide technical assistance to MCC in carrying out all FSM activities. They have more capacity, as they have been in the business for a long time.

Additional benefits	***Job creation:*** The establishment of CBEs to directly manage the Public Toilets will create about 36-40 new jobs in the communities. Improved sludge management will create jobs for FS collection, haulage and treatment, processing and sale of reusable products. 3 new businesses employing about 15 people will be established. A total of up to 55 new jobs will be created. ***Green Growth.*** This project aims at collecting and digesting faecal sludge, which will result in reduction of (indirect) CO_2 emissions from FS accumulated and untreated in existing latrines. The project will finally provide low cost organic fertiliser for local farmers, as fertilisers are becoming increasingly expensive. ***Gender Mainstreaming:*** The project will (i) increase access to improved and safe toilets for women and children; (ii) reduce violence against women when using shared latrines at night; (iii) empower and increase job opportunities for women (at least 30% of the new businesses will be owned by women).

Sustainable sanitation in Urban slums, Sanergy, Nairobi (Kenya)

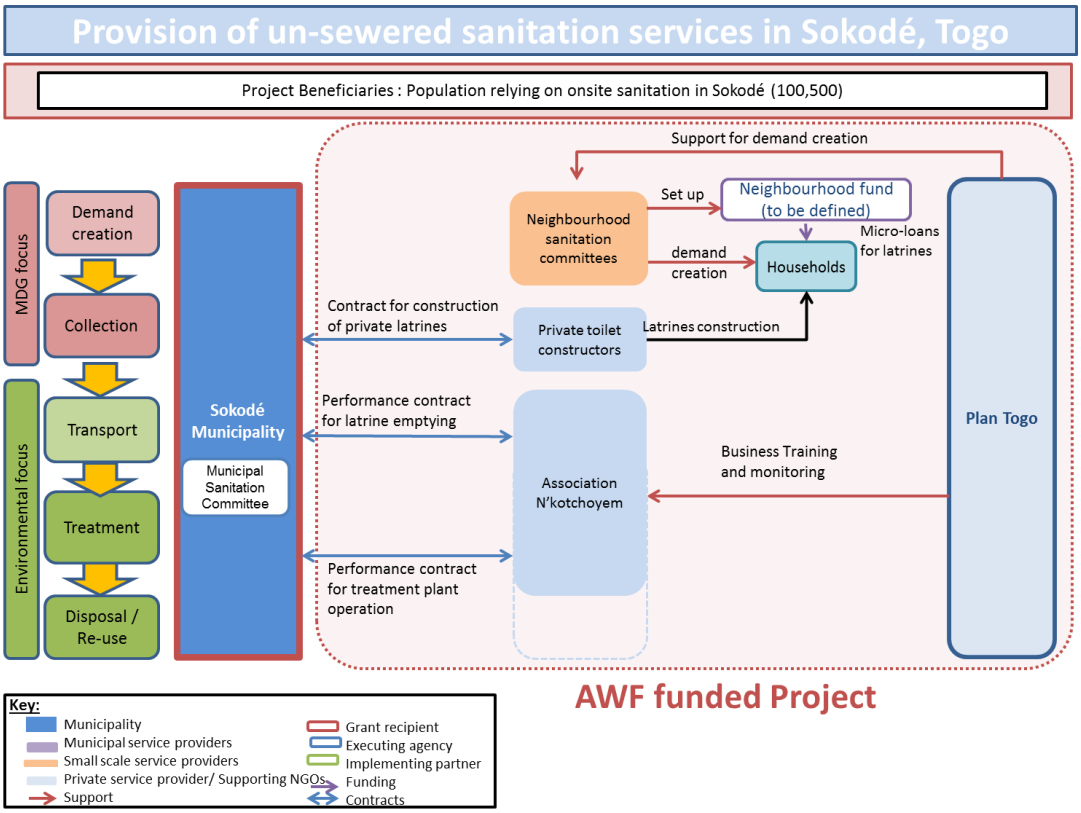
AWF grant implementation status, dates and budget	• Status: Sanergy started operating as a business in 2010. The project agreement with AWF was signed in February 2014. The project will start in March 2014 for 2 years. • Budget: AWF provides a EUR 731,400 grant representing 25% of the total project budget of EUR 2,932,980.
Geographical scope and scale	• Geographical Scope: Muruku, a slum of Nairobi. • Scale: the project targets an estimated 100,000 beneficiaries. Sanergy plans to extend its activities in a subsequent scale up phase to other informal settlements to reach up to 300,000 beneficiaries out of the 1.75 million people living in slums in Nairobi.
Project objectives	• Sanergy aims to improve access to sanitation in slums through the franchised management of shared sanitation facilities, and provision of collection, treatment and reuse services. Sanergy developed a franchise model for operation of public facilities by micro-entrepreneurs. Franchisees buy from Sanergy a "Business in a box" to operate a "Fresh Life" toilet (including a toilet, cleaning material, marketing material, training of business) and pay for regular emptying. Sanergy provides daily emptying services and transports the FS to their treatment plant where they produce and sell reuse products, including organic fertiliser, bio char, urine fertiliser, biogas.
Institutional and funding arrangements	• Sanergy, a social enterprise, leads the project. Sanergy operates through a partnership with Athi Water and Sanitation Board, Nairobi Water, and Nairobi City Council to reach informal settlements with hygienic sanitation. • The figure below describes the arrangement for provision of sanitation services by Sanergy. It also identifies the activities financed by AWF and the grant implementation arrangements. 
Activities financed by AWF	AWF funding will be used to finance the following activities: • Manufacturing of "Fresh life" toilets and development of sanitation marketing strategies to promote the brand; • Development of franchise entrepreneurs (training of franchisees and provision of microfinance to franchisees through Kiva, a microfinance online platform); • Scale up of value chain logistics for primary collection of FS and urine, employing waste collectors; • Improvement of FS treatment plant capacity and production of reuse by-products.

Sustainable sanitation in Urban slums, Sanergy, Nairobi (Kenya)

Challenges to sustainability	Strategies developed
Little **demand from households**: a substantial portion of the population defecates in the open.	• **Development of a business "aspirational marketing" strategy**: Sanergy promotes a brand ("Fresh Life") that creates an aspiration and generates positive emotional reactions in users' minds. • **Support from NCC and NCWS:** They will support public hygiene promotion activities within the project area. NCWSC has also promised to provide water connection to the sanitation units.
Absence of **qualified service providers**	• **Development of a franchise business model** in which Sanergy is providing training, support and equipment to entrepreneurs buying and operating Fresh Life toilets; • **Job creation**: Sanergy employs and trains young persons in the community as waste collectors.
Limited **access to capital** for micro-entrepreneurs to purchase the "Fresh Life" starting package.	**Microfinance to franchisees:** Sanergy partners with Kiva, a micro-lending online platform to provide microcredit to their franchisees
High operating costs: Daily emptying may not be financially viable for Sanergy in the long run: operating costs are high.	**Technological innovation for toilets:** Sanergy is in the process of developing a toilet requiring less frequent emptying.
Financial viability of FS collection and treatment is low	**Generation of additional revenue through reuse:** • Sanergy is developing by-products to generate additional revenues to cover the costs of FS collection and treatment: these include organic fertiliser, bio char, urine fertiliser, biogas. • **Technological innovation for FS reuse:** Sanergy is developing an innovative design of UDDT latrines (urine diversion) to collect urine separately and produce urine-based fertiliser. • However, demand for FS by-products from farmers and biogas users' needs to be demonstrated.
Access to land: Sanergy needs to negotiate with landlords and the city council to install the shared latrines and waste transfer stations and expand their treatment plant.	**Partnership with the city council.** Sanergy partnered with the city council through a MOU, to facilitate coordination on specific issues particularly related to urban planning.

Additional benefits	**Job creation:** The project creates new jobs along the value chain for manufacture and sale of new urine diversion dry toilets, franchised management of toilets, collection and transportation of FS and urine, and treatment, processing and sale of reusable products. **Green Growth:** • Collection of FS will reduce methane emissions from accumulated and untreated faecal sludge. • Reuse of FS will diminish the use of artificial fertilisers, reducing significant amounts of (indirect) CO2 emissions. **Gender:** • Improve access to safe sanitation facilities will benefit women particularly, who are particularly threatened by sexual assaults when using existing public toilets; • The project creates job opportunities for women regarding promotion and marketing of sanitation related activities, processing and sale of end-products; • The project promotes women's participation at all levels and in community leadership.

Toilets for all through the valorisation of FS and microcredit, Sokodé (Togo)

AWF grant implementation status, dates and budget	• Status: The grant agreement with AWF was signed in May 2013. The project started in November 2013 for 3 years. • Budget: The total budget is EUR 1,544,700, including EUR 1,150,000 from AWF (74% of total project cost), EUR 56,200 Euros from the Municipality of Sokodé, EUR 210,000 from Plan-Togo and EUR 128,500 from beneficiaries.
Geographical scope and scale	• Scope: The project targets the municipality of Sokodé and 5 neighbouring localities. • Scale: It will benefit the 100,500 inhabitants of the town of Sokodé and 30,000 inhabitants of neighbouring localities, who will benefit from improved collection of FS.
Project objectives	• The project aims to: ○ Provide access to sanitation facilities for households, through construction of hardware and microfinance support; ○ Improve services for collection and transport of FS; ○ Define a strategy for sustainable faecal sludge management and safe reuse;
Institutional and funding arrangements	• The project is led by the municipality of Sokodé, which is the grant recipient. • The NGO Plan Togo acts as the delegated executing agency managing the project implementation. It supports all actors with training and business support. The Municipality contracts private constructors to build private latrines. Neighbourhood sanitation committees – or existing community groups (women groups, youth association, etc.) - provide sanitation marketing and microcredit for households. A local association is contracted by the municipality to provide emptying services and operate the newly built FSTP. • The figure below describes the arrangements for providing sanitation services in Sokodé. 
Activities financed by AWF	The AWF Grant is funding the following activities: • **Component 1: Access to sanitation facilities for households**: ○ Set up municipal bye-laws establishing a framework for private sanitation and establish ad-hoc organisations (Neighbourhood sanitation committees and a communal sanitation committees); ○ Contract the construction of private latrines to private contractors. • **Component 2: Improve services of collection and transport of FS**: ○ Set up municipal bye-laws for collection and transport of FS and build actors' capacity (service providers and Neighbourhood sanitation committees, communal sanitation committees)

Toilets for all through the valorisation of FS and microcredit, Sokodé (Togo)

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Contract a private operator (N'kotchoyem Association) on a performance basis for the collection and transport of FS. Provide necessary equipment.

Component 3: Define a strategy for sustainable faecal sludge management and safe reuse:

Set up a municipal bye-laws for the treatment and reuse of FS;
Construct and equip a faecal sludge treatment plant;
Contract and train the N'kotchoyem Association to operate the plant. Test the potential for selling reuse fertiliser.

Component 4: Management and learning

</td></tr>
<tr><td colspan="2">
<table>
<tr><th>Challenges to sustainability</th><th>Strategies developed</th></tr>
<tr><td>Weak capacity of the municipality</td><td>This represents a major risk for the sustainability of the project, although the involvement of the mayor is strong and provides the required leadership. Sanitation Committees will be set up in the municipality and neighbourhoods. They will work in close coordination with Plan Togo, the executing agency for the project. Plan Togo will contract private firms to train the municipality and will also hire two technical experts on FS management and a civil works engineer that will work at the municipality level, as well a financial manager and an internal auditor. The success of the capacity building will depend on the collaboration and supervision from Plan Togo with the committees and on the municipality's ability to maintain such staff once funding has ended.</td></tr>
<tr><td>Absence of sanitation standards and lack of enforcement by urban authorities</td><td>The project will start by setting up local bye-laws for policing sanitation (access to private sanitation for household, and collection, transport, treatment and reuse of FS)
The means that will be used by the municipality to implement legal standards are unclear.</td></tr>
<tr><td>Low demand for latrines from households</td><td>Neighbourhood committees will be set up and trained by the private firm hired by Plan Togo to perform sanitation promotion, market the sanitation technologies to households in coordination with the municipality. They will seek to transform them into SMEs. However the nature of these committees and their actual capacity to perform these tasks is unclear. How they will operate after the AWF grant ends has not yet been defined. This will be discussed at the beginning of the project so as to set up actions to ensure sustainability of the neighbourhood committees.</td></tr>
<tr><td>Low affordability of latrines for the poor</td><td>The project will set up pro-poor sanitation financing mechanism through community-based micro-credit funds. Revolving funds will encourage the continuity of private latrine construction beyond AWF grant. The functioning of the funds will be defined upon local practices and participatory discussions. This component still needs to be further defined upon local practices and participatory discussions. Setting up one fund per neighbourhood might not be the most cost-effective solution.</td></tr>
<tr><td>Low affordability of emptying for the poor threatens the financial viability of emptying services</td><td>FS emptying and transport services will be managed by non-profit organisations to limit operation costs. The service will be extended to neighbourhood localities to increase revenues. The development of FS reuse might enable generating additional revenues from selling fertilisers, which would enable to lower to emptying fees for households.</td></tr>
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</td></tr>
<tr><td>Additional benefits</td><td>Job creation. The project supports the creation of 6 community-based small-enterprises, employing 30 persons to promote sanitation, market private latrines to households and manage the neighbourhood micro-credit fund. It also creates jobs for the collection, transport, treatment and reuse of FS.
Green Growth. Collection and treatment of FS will reduce methane emissions from accumulated and untreated faecal sludge. Possibilities for using stabilised sludge or bio-solid products will be explored. Reuse of FS will diminish the use of artificial fertilisers, reducing significant amounts of (indirect) CO2 emissions. The production of organic fertilisers will contribute to food security in the town area.
Gender Mainstreaming. Neighbourhoods Sanitation Committees include at least 2 women (on a group of 5) responsible for the management of the neighbourhood sanitation microcredit fund, as well as of social marketing. They are also represented in the Municipal Sanitation Committee as well as in the project steering committee.</td></tr>
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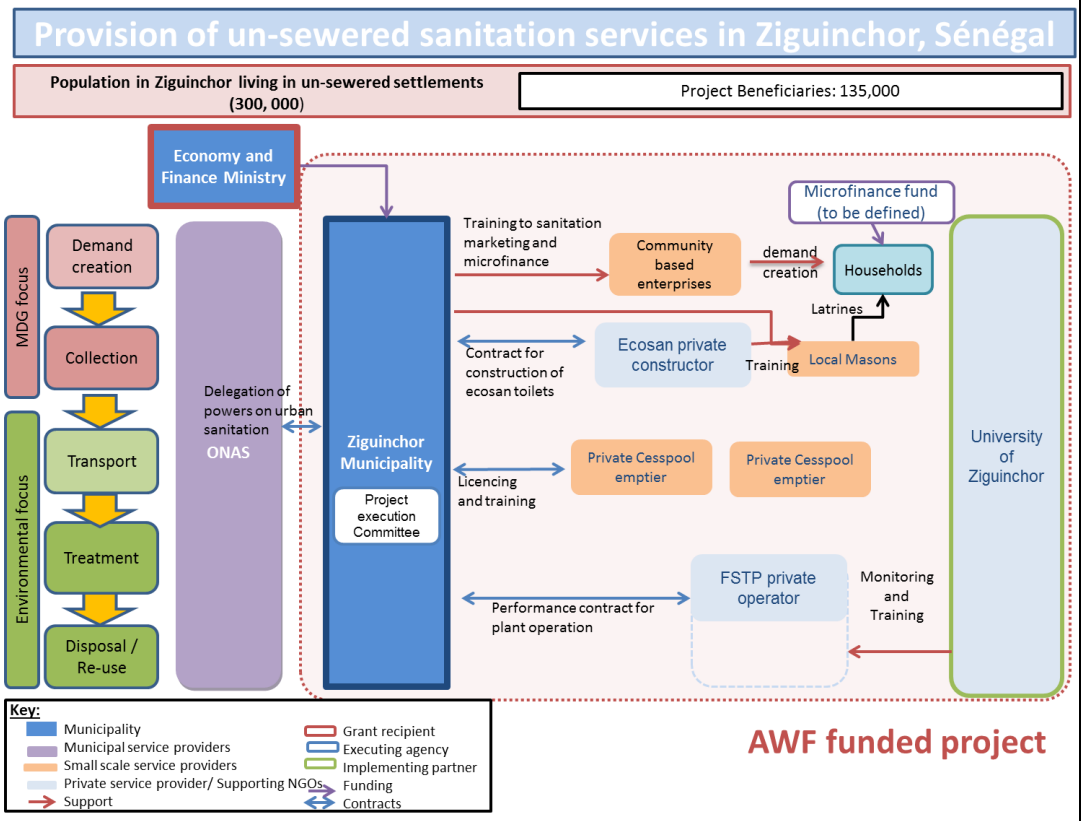
Improvement of the management and valorisation of FS in Ziguinchor (Sénégal)

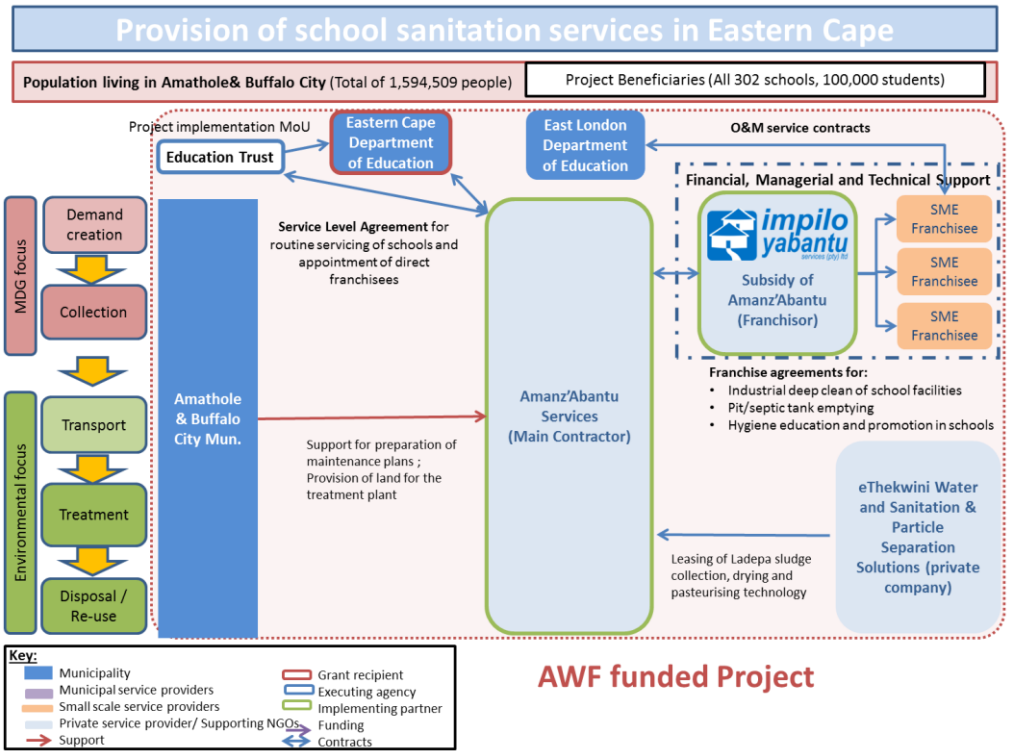
AWF grant implementation status, dates and budget	• Status: The grant agreement with AWF was signed in November 2013. The project started in April 2014 for a duration of 3 years. • Budget: The total budget is EUR 1,632,070 Euros, including EUR 1,260,000 from AWF (77%), EUR 316,720 from the Municipality of Ziguinchor and EUR 55,350 from beneficiaries.
Geographical scope and scale	• The project targets Ziguinchor municipality in the Casamance region (southern Senegal). • It will benefit 135,000 poor urban dwellers out of a total population of 300,000.
Project objectives	• The project aims to: ○ Provide access to sanitation facilities for households, through construction of hardware facilities and microfinance support; ○ Professionalise services of collection and transport of FS; ○ Implement a municipal service for faecal sludge treatment and safe reuse;
Institutional and funding arrangements	• The project is led by the municipality of Ziguinchor. • The Grant recipient is the Economy and Finance Ministry of Senegal. ONAS is the national public sanitation service provider, operating in all major urban areas of Senegal. It mostly operates sewerage services but has also been involved in supervising on-site sanitation services in recent years. As ONAS has no operational representation in Ziguinchor, it has delegated the project management to the Municipality of Ziguinchor, which acts as the Executing Agency. ONAS will sit in the Project Steering Committee and will be more particularly involved in the licencing and control of emptiers. This project aims to experiment a new model of partnership with municipalities to implement un-sewered urban sanitation projects. • The Municipality will contract private constructors to build private latrines and Community based enterprises will provide sanitation marketing and microcredit for households. It will also contract a private operator to operate the newly build FSTP with AWF funding. The University of Ziguinchor will support the development of FS reuse with technical support and research. • The figure below describes the arrangement for providing sanitation services in Ziguinchor. 
Activities financed by AWF	• **Component 1: Access to sanitation facilities for household**: ○ Train the municipality and community based organisations of neighbourhoods and local artisans involved in the construction of private latrines ○ Support the adoption of local bye-laws for private sanitation and establish ad-hoc organisations (Neighbourhood sanitation committees and a communal sanitation committee)

	○ Contract the construction of private latrines to private contractors, collaborating with local SMEs • **Component 2: Improve services of collection and transport of FS**; ○ Train the municipality, neighbourhood representatives and manual and mechanical emptiers to improve the quality of emptying services ○ Enhance the management of collection and transport of FS through the licensing of trained emptiers and supervision by the municipality and ONAS • **Component3: Faecal sludge treatment and safe reuse**: ○ Construct and equip a faecal sludge treatment plant; ○ Contract and train a private operator to operate the plant. Test the potential for selling reuse fertiliser. • **Components 4 and 5: Project management and learning**

Challenges to sustainability	**Strategies developed**
Weak capacity of the municipality	The capacity of the municipality will be reinforced by hiring a FS management and development project consultant financed with the AWF grant. Trainings have been included for each component. The executing team will be supported by the steering committee, of which ONAS is part. However, the support from ONAS seems to be weak and might also be limited by their own low capacity. The absence of a technical support to the municipality (from a NGO for instance) might be a risk for the project implementation
Low demand for latrines from households	Community-based enterprises will be set up and trained by the municipality to perform sanitation promotion and market the sanitation technologies to households in coordination with the municipality. However the nature of these committees and their actual capacity to perform these tasks is unclear. How they will operate after the AWF grant ends has not yet been defined, and represents a threat to the sustainability of the project.
Low affordability of latrines for the poor	The project will set up pro-poor community-based sanitation micro-credits that will run beyond AWF grant. This component still needs to be further defined however.
Low affordability of emptying for the poor threatens the financial viability of emptying services	FS emptying and transport services will be managed by local operators which will be trained, licensed and supervised by the municipality. The development of FS reuse might enable to generate additional revenues from selling fertiliser, which would enable lowering emptying fees for households.
Sanitation technology is not adapted to local demand and needs	The project will promote the adoption of Ecosan latrines to limit the challenges related to and encourage FS reuse as fertiliser.
Institutional dependance from ONAS	As ONAS has no representation in the town, this project will enable to test a new model of partnership with localities to implement urban sanitation, under which ONAS delegates its power relating to urban sanitation to the municipality.

Additional benefits	**Job creation**. The project supports the creation of 6 community based micro-enterprises to promote sanitation, market private latrines to households and manage the neighbourhood micro-credit fund. It reinforces the skills of local masons and creates jobs for the collection, transport, treatment and reuse of FS. In total it will create at least 50 jobs. **Green Growth.** Collection and treatment of FS will reduce the pollution of surface water and limit the eutrophication of the Low Casamance river. This will contribute to a better exploitation of these resources for economic purposes (riziculture, navigation, fish breeding). It will also reduce methane emissions from accumulated and untreated faecal sludge. Possibilities for using stabilised sludge or bio-solid products will be explored. Reuse of FS will diminish the use of artificial fertilisers, reducing significant amounts of (indirect) CO2 emissions. The production of organic fertilisers will also contribute to food security in the town area. Finally, the project will promote sanitation facilities that resist floods, to which the town has been vulnerable in the past years. Organic fertilisers can also be used for re-forestation to limit desertification. **Gender Mainstreaming**. The community based micro-enterprises selected for the sanitation promotion and will include at least 50% of women (15). 25 women will be recruited to manage the microfinance component.

Impilo Yabantu, Social Franchising for operations and maintenance of school sanitation facilities and the demonstration of faecal sludge treatment, Eastern Cape (South Africa)

AWF grant implementation status, dates and budget	• Status: ImpiloYabantu started operating as a business in 2009 with a grant from the Irish-Aid for the Butterworth Schools Sanitation and Water Servicing Pilot Project (2009-2012), which successfully covered 400 rural schools in the Province of Eastern Cape. The AWF grant to finance a scale-up project is scheduled for approval in 2014. The project will start in 2015 and will be conducted over a period of 30 months. • Budget: the total budget is EUR 2.6 million. The AWF contribution is of EUR 1.1 million (43% of total project cost). The Department of Education (DoE) of the Eastern Cape Province will contribute EUR 1.3 million (52% of total project costs) towards the maintenance services of the target schools.
Geographical scope and scale	• Scope: The project will be implemented in the Educational District of East London (Eastern Cape Province) in peri-urban areas of Amathole and Buffalo City Municipalities. • Scale: The maintenance of school sanitation facilities will benefit 302 schools and about 100,000 students and teachers.
Project objectives	• The goal of the project is to demonstrate affordable and sustainable operation and maintenance of school sanitation facilities and safe treatment through social franchisees and handling of faecal sludge in East London Educational District. The project will lead to improved school sanitation and faecal sludge management in Eastern Cape Province.
Institutional and funding arrangements	• The project is led by Amanz' abantu Services, a private company. • The DoE has selected Impilo Yabantu (Amanz' abantu Services (Pty) Ltd (AAS)'s subsidiary company) as the service provider in order to set up the operational model. The franchisees will be supervised by Impilo Yabantu who will be responsible for providing the required training; quality management system and procedures; a backup of off-site skills; and pre-financing of basic tool boxes for basic repairs and maintenance. • AAS will pilot the proposed Ladepa sludge drying and pasteurising technology, co-invented and piloted by eThekwini Water and Sanitation (EWS) and a private company Particle Separation Solutions (Pty) Ltd (PSS). Based on results, it will enter into a public-private partnership arrangement with Municipal districts of Buffalo City and Amathole, for continued availability of this re-use option. • The figure below describes the arrangement for service provision: 
Activities financed by AWF	**Component 1: Improved school sanitation Infrastructure** • Mapping of and collection of baseline data on the target schools with GIS system; • Improvements in the physical state of sanitation facilities (only a small proportion, mostly

Impilo Yabantu, Social Franchising for operations and maintenance of school sanitation facilities and the demonstration of faecal sludge treatment, Eastern Cape (South Africa)

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<tr><td></td><td>funded by DoE);
• Hygiene education and promotion for pupils and teachers;
• Development and Pilot of menstrual hygiene plans for girls
Component 2: Development and Application of local franchise business model
• Training, selection and equipment of local franchisees;
• Development of Operational Health and Safety procedures and Quality Management Systems
Component 3:Demonstration of mobile FSM for safe handling and reuse
• Development of operating procedures/mechanism for the Ladepa sludge drying and pasteurising technology;
• Set up of a leasing agreement for LaDePa sludge drying and pasteurising technology (based on results);
• Implementation of faecal sludge safe handling and reuse in East London District.
Component 4: Project Management and knowledge management</td></tr>
<tr><td>Challenges to sustainability</td><td>Strategies developed</td></tr>
<tr><td>Absence of a sustainable scheme to assure usability of school sanitation facilities</td><td>Development of an innovative business with social franchising model for O&M of school facilities
This model has been tested as a prototype within Eastern Cape Province and has gained the interest and endorsement from local government partners within DoE and the Municipalities as a viable model for sanitation infrastructure and services. It offers strong capacity building elements attained through the institutionalisation of the structures and the close partnership arrangements with both the municipal level partners and the local community.</td></tr>
<tr><td>Lack of regular funding for maintenance of school water & sanitation facilities</td><td>Direct political support from relevant government departments especially the Department of Education (DoE).
There is sufficient buy-in and commitment from the DoE and the municipal authorities owning the infrastructure to outsource its responsibility for routine servicing, and the ability of this authority to procure, appoint and direct microbusinesses to undertake the work under the guidance of the franchisor. The DoE has committed to ring-fence 50% of the current school maintenance budgets for sanitation O&M. Franchisees will be paid for services rendered through the educational district offices.</td></tr>
<tr><td>Lack of ownership of communal facilities to understand the benefits of on-site treatment, safe handling and potential reuse</td><td>Hygiene education and Promotion
At the school level, the establishment of the school sanitation clubs will offer targeted training and exposure on benefits of improved sanitation.
The training and capacity building component for local community and government partners will help establish necessary linkages within districts for the benefits accruing from waste as a resource and reuse as it relates to cleaner environments and better health.</td></tr>
<tr><td>No treatment solution to deal with the proliferation of VIP latrines and the resulting health hazard of unsafe disposal</td><td>Piloting of the Ladepa, a mobile sludge drying and pasteurising technology. Moving the activity into peri-urban areas, transport off-site will be required. The project will pilot the Ladepa technology (which stands for Latrine Desludging and Pasteurising). Its simplicity of operation allows for simple integration of the sludge treatment process with community needs, as it can be fed by simple pit emptying technology. It recycles valuable nutrients from the sludge that would otherwise go to waste. The pasteurisation of pathogens reduces the risks to human health. Finally, the technology allows addressing the current challenges of disposal of faecal sludge in the peri-urban schools and will drastically cut down transport cost. However, the current LaDePa has high energy cost for pasteurising with IR beamers. Cost savings come from avoided landfill costs and revenues come from the sale of dry sludge pellets.</td></tr>
<tr><td>Additional benefits</td><td colspan="2">Job Creation and Gender mainstreaming. The project will create employment for 5 trained franchisees (3 female franchisees and 2 male), operating as local entrepreneurs and job opportunities for the local youth operating under the franchisees as part of the service team, and to operate the LaDePa machine.
Green Growth. The project will develop the application of an innovative mobile technology that promotes safe handling and reuse instead of the current disposal into trenches, and drastically reduces transport.</td></tr>
</table>

Annex C – Useful references

Sanitation marketing

WSP Sanitation marketing toolkit: http://www.wsp.org/toolkit/toolkit-home
This toolkit and its print companion, Introductory Guide to Sanitation Marketing (2011), offer practitioners and program managers suggestions based on WSP's experience implementing sanitation marketing in a range of diverse geographic, cultural, and political settings. Each chapter covers a key component:

- **Conducting Formative Research** describes how to undertake this critical first step of any sanitation marketing program;
- **Developing a Marketing Strategy** focuses on the Four Ps of marketing;
- **Developing a Communication Campaign** provides details on how to develop a communication campaign with the assistance of an advertising agency; and
- **Implementation** explores the roles and responsibilities of government, nongovernmental organisations (NGOs), private sector firms, and civil society, with suggestions for procurement, budgeting, monitoring, evaluation, and timelines.

Pedi D. and Jenkins M., Consumer Behavior: How do we understand sanitation consumers in target markets? UNICEF Sanitation marketing learning series Guidance Note 2 (link)
This Guidance Note presents key concepts and insights about household latrine consumers and provides some practical tips for planning and managing consumer market research to inform your SanMark strategies.

Rios M. and Jenkins M., Demand Promotion and Marketing: How do we reach rural target markets in Sanitation Marketing? UNICEF Sanitation marketing learning series Guidance Note 7 (link)
This Guidance Note outlines the three demand creation objectives and marketing communications methods that can be used to achieve these. It then focuses on presenting communications and marketing techniques and tools at the critical interpersonal level required to stimulate household investment in improved sanitation, including low cost methods for community-based promotion and marketing of new latrine products and services.

Sanitation Marketing community of practice website: http://www.sanitationmarketing.com/
The SanMark Community of Practice is a platform for peer exchange and sharing lessons on how to help sanitation markets reach the poor. They have also developed the 7 step "SanMark" Process as a tool to assist governments, organisations and sanitation professionals to implement effective SanMark strategies.

Facilitating access to finance

SHARE Research – Markets (http://www.shareresearch.org/Page/Detail/markets)
SHARE is a DFID-funded initiative that supported a series of studies and action research programmes on using microfinance to support the development of sanitation markets at various stages of the value chain. This page gathers a series of resources on how to make it work. A recent presentation made in Dar Es Salam in May2014 (link) identifies how public funders can get involved to support the development of a sanitation microfinance market.

Meera Mehta, "Assessing Microfinance for Water and Sanitation", 2008 (link)
This study assesses the potential market for using microfinance in the water and sanitation sector, and identifies specific opportunities for potential learning, investment, and support.

Chatterley, C., Gonzalez, O., Sparkman, D. et al (2013) Microfinance as a Potential Catalyst for Improved Sanitation: A Synthesis of Water for People's Sanitation Lending Experiences in Seven Countries (link)
This paper presents various microfinance programs introduced to improve access to sustainable sanitation piloted by Water for People (W4P) in seven countries – Bolivia, Guatemala, India, Malawi, Peru, Rwanda, and Uganda. The paper synthesised lessons from these experiences in order to initiate and improve donor-led programs.

Platform of Toolkits to develop microfinance products for WASH:
http://www.washmicrofinance.org/
Water.org and MicroSave jointly developed a series of toolkits to provide information and tools for financial institutions to develop microfinance products for WASH investments. The toolkits present essential information, principles and practices for successful development of WASH financial products. They are designed to be applicable across a variety of markets, lending methodologies and business models.

A Micro Financing Framework for Rural Water and Sanitation provisioning in Sub-Saharan Africa, United Nations University, (2014). (link)
This paper outlines a framework by which self-sustaining micro financing facilities can be realised for equitable and safe rural WSS provision.

Sanitation as a business

Chapin J. and Pedi D., Sanitation Supply Chains and Business Models: How can we improve market systems? UNICEF Sanitation marketing learning series, Guidance Note 3 (link)
This Guidance Note offers tips for understanding sanitation supply-side conditions and identifying and testing supply chain strategies and sustainable business models for Sanitation Markets strategy development. It should be read alongside Guidance note 4: Private Sector. This Guidance Notes proposes a useful list of resources on how to develop a business model.

Pedi D., Jenkins M. and Chapin J., Private sector development: How do we improve capacity of local sanitation businesses? UNICEF Sanitation marketing learning series Guidance Note 4 (link) This Guidance Note offers some tips for engaging and working with private sector partners to develop a sanitation market. It should be read alongside GN3: Sanitation Supply Chains and Business Models. This Guidance Notes proposes a useful list of resources on fostering enterprises development.

CLARA planning tool for urban sanitation (link)
The CLARA Simplified Planning Tool (SPT) aims to support local planners to find the best solution for water supply and sanitation in their planning objective. The SPT compares full costs (investment, operation and maintenance, and re-investment costs) of various alternatives of water supply and sanitation systems.

Franchising at the BOP

Ahlert et al (2008), Social Franchising: A Way of Systematic Replication to Increase Social Impact (link)
This manual on social franchising aims to help businesses transform into a franchise model in order to scale up. It is based on findings from a comprehensive review of social franchise businesses.

Jay Bhagwan, Kevin Wall, and Oliver Ive (2010) "Using franchising principles to improve water services reliability" (link)
This paper presents the results of South African research on franchising for the WASH sector. It found that franchising partnerships could alleviate and address many challenges in the operation and maintenance of water services infrastructure.

Annex D – Bibliography

Project documents:

AWF-funded projects appraisal documents

CCODE (2012), Mid-term Assessment Review- Improving access to water and sanitation for the urban poor in the city of Blantyre. Malawi , August 2012 (Prepared by Alan Etherington)

CCODE (2012), Mid-term review case study- Social capital and financial discipline: using an urban poor federation to make Water & sanitation loans in Blantyre, Malawi. August 2012 (Draft version V1)

TREND (2014), Project completion report, Improved sanitation, water supply and hygiene services delivery to the urban poor in Ghana through tripartite partnerships (TPP project). April 2014

Other sources cited:

Ahlert et al (2008), Social Franchising: A Way of Systematic Replication to Increase Social Impact [Online] available from http://www.stiftungen.org/fileadmin/bvds/de/Projekte/Projekttransfer/Social_Franchise_Manual_Englisch.pdf

Bhagwan J., Wall K., and Ive O. (2010) "Using franchising principles to improve water services reliability"

Sandec (2006). Urban Excreta Management - Situation, Challenges and Promising Solutions. In M. Strauss, D. Koné, H. Koanda, & M. Steiner (Ed.), 1st International Faecal Sludge Management Policy Symposium and Workshop. Dakar: Sandec