

Small town sanitation & hygiene learning series Babati, Tanzania

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▼ One of the open markets in Babati Town, Tanzania



WaterAid/ Aditi Chandak

Key messages

1. Identification of relevant partners (local government, service provider, civil society, academics, etc.) is of paramount importance in the scenario planning process.
2. Engaging key ministries and stakeholders at each stage of the research process was critical in ensuring ownership of the project and research findings.
3. The involvement of local government officials in data collection is crucial and increased the studies potential to reach almost all dwellings in the town and their participation in formative research ensured their acceptance of the results and helped the research to be fed into the planning process.
4. The development of any masterplans should be done, for a better coherence, after the scenario planning process. This would allow good integration of the solutions identified and proposed in a participatory way to the general development plan of the town.



WaterAid

1. Introduction and context

The objective of this brief is to present the main findings from a formative research conducted by WaterAid in a small town and the critical elements that should be considered in a perspective of scalability.

In Tanzania, the increase of unplanned settlements has intensified the challenge of increasing access to environmental sanitation and hygiene services to urban dwellers. It is estimated that only 34.2 percent of the urban population has access to improved sanitation, with the remaining using basic sanitation facilities or practicing open defecation (NBS, 2014). In terms of hand washing facilities, less than 25% of the total population (urban and rural) has a designated place for hand washing with soap (URT, 2014). Furthermore, only 38% of schools in Tanzania have adequate number of latrines; 20% of schools have water supply facilities within the school premises and less than 10% of all schools in the country have functioning handwashing facilities with available water to enable children maintain their personal hygiene and internalize relevant sanitation practices (URT, 2014).

Although Tanzania has pledged to increase access to improved sanitation to 95% of the population by 2025, water, sanitation and hygiene (WASH) associated infections and diseases owing to poor access to sanitation remain a major public health threat costing over 301 billion Tanzanian shillings each year (WSP, 2012). The most hit are small towns that are rapidly transforming and urbanizing without land use planning and management systems; as well as commensurate supply of basic services such as water, sanitation and other social services to serve the growing population.

For the development of a scalable approach adapted to these growing areas, WaterAid as part of the Sanitation and Hygiene Applied Research for Equity (SHARE) consortium carried out a research-based participatory planning for sanitation and hygiene in Babati, a Tanzanian secondary city, with Nelson Mandela African Institution of Science and Technology (NM-AIST), Babati Town Council (BTC), the Babati Water and Sanitation Authority (BAWASA) and Manyara Regional Secretariat in the period of 2016-2018.

Understanding the context of Babati should help the reader to view the approach and lessons in that light. However, it is hoped that this case study of Babati town will shed light on mechanisms and conditions under which institutions make decisions to prioritise, invest in and/or improve sanitation and hygiene practices in an emerging town.

2. Genesis of the project, strategy and approach



Project genesis

Several criteria were used to identify a town for this study. Primarily, the town needed to be in one of WaterAid's existing or planned target areas. Using this as a starting point two towns were selected for site visits in July 2015, namely Babati Town (Babati District, Manyara Region) and Geita Town (Geita District, Geita Region). In order to identify the most suitable town, the following criteria were considered:

- Leadership and human resources,
- Readiness of the local authorities,
- Openness to partnership,
- Existing plans and services,
- Financial resources.

Based on the above criteria Babati town was selected as the site for the study. Babati has a population of 110,000 and sits at a cross road between Arusha, Singida, Dodoma, Mbulu and Simanjiro, covering an area of 460.86 km². The Region of Manyara in which it belongs was established in 2002 and Babati Town announced as the regional headquarter in 2004. Economic activities of Babati are primarily agrarian which attracts people to the area. It has four major processing plants for sunflower and over 100 small processing plants for various agricultural products.

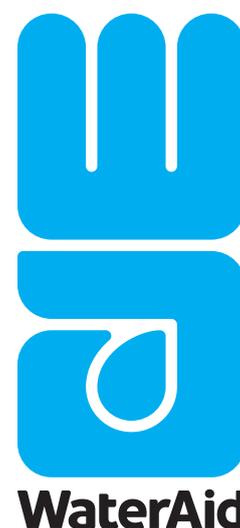
As of 2019, Babati has neither proper wastewater management system nor sanitary solid waste disposal. There are two separate craters outside of the central Babati designated for the crude dumping of solid and liquid wastes. These dumping sites are not lined or protected or cordoned off from the public.



Strategy and approach

The approach to participatory planning for sanitation in Babati followed a number of steps, which are briefly described below.

- **Partnership forming:** the project was carried out in partnership with Nelson Mandela African Institution of Science and Technology (NM-AIST), Babati Town Council (BTC), the Babati Water and Sanitation Authority (BAWASA) and Manyara Regional Secretariat. Roles, responsibilities and the importance of partners involved were assessed using WaterAid's partnership framework (Beale et al., 2018).
- **Inception:** the inception workshop was carried out to launch the research project, and build a common understanding on the aims of the research, project timeline, expected outputs and sought consensus on roles and responsibilities.
- **Data collection and formative research:** a large mobile-based survey (20,000 households) was done to gather data on the sanitation status of the town alongside a cross sectional study using qualitative and quantitative methods which assessed the socio-demographic, cultural and economic profile of the town and its existing sanitation and hygiene status and practices. The aim of this was to understand the households' and institutions' motives to invest in and improve sanitation and hygiene practices and the risks that drive behaviour change. One important outcome of this study was the development of a [Shit Flow Diagram](#), which shows the proportion of excreta that is safely managed or not.
- **Political Economy Analysis:** a Political Economy Analysis (PEA) was carried out to understand what drives institutions (government, donors, NGOs, authorities), and private sectors to invest in and/or improve sanitation and hygiene practices in an urban context. This was carried out in Babati town (Manyara region), Bomang'ombe and Moshi (Kilimanjaro region), Arusha city and Temeke Municipality in Dar es Salaam.
- **Community engagement:** this was understood as the process of engaging communities in the project and getting their feedback throughout the process. The findings from the formative research and the PEA were presented and discussed at Ward level during different workshops.
- **Integration of research into existing master planning process:** a consultant was simultaneously working on a masterplan for Babati whilst this research was taking place and it was possible to integrate some of the results into a chapter on sanitation.
- **Scenario planning:** scenarios were developed based on the research during a workshop held in Babati Town. The workshop aimed to enhance the understanding of key stakeholders on the current sanitation and hygiene status of Babati, to find an agreement on suitable sanitation and hygiene options and to draw up an action plan for the implementation of the suitable and agreed scenario.
- **Business plan development:** as part of supporting the development of a Babati town-wide sanitation and hygiene, adaptive model business cases was developed based on the selected scenarios.



3. Results



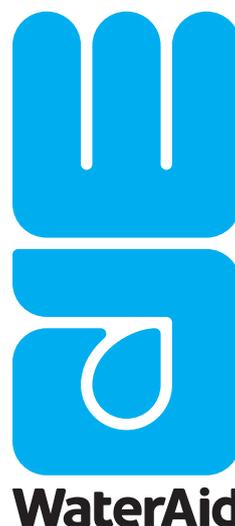
Socio-Demographic Characteristics

The population of the Babati town Council (BTC) currently stands at about 110,000. 85% of the household own the dwelling while 11.2% live in a rental house. Furthermore, the average family size is five and 50.4 % of the households have under five children while 49.6% of the households are without under-fives.

More than half of respondents were engaged in crop farming as a primary occupation and 60% of people had attained a primary level of education. Salaried worker accounted for 8.0% of the primary occupation. The average monthly income of respondents was 96 USD.

Sanitation and hygiene conditions in Babati

The management of wastewater in Babati is currently dependent exclusively on on-site sanitation systems. Based on the research 90% of households own toilets of which 7.4% share these facilities. The most common type of toilet is a pit latrine with a slab, accounting for 42%. Half of households empty their toilets when they are full – the other half abandon them and build a new one. There is not proper treatment plant for faecal sludge or wastewater. The forms of disposal existing in BTC are burying the sludge at nearby hole (7%), while much of the collected sludge is disposed of in an open area about 5km from the centre of the town in an area where people are cultivating food crops (49%). An analysis done using Shit Flow Diagram (SFD) indicates that **69%** of all sludge produced by the various types of sanitation in Babati is currently **NOT safely managed** thus exposing people to health risks (figure 1).



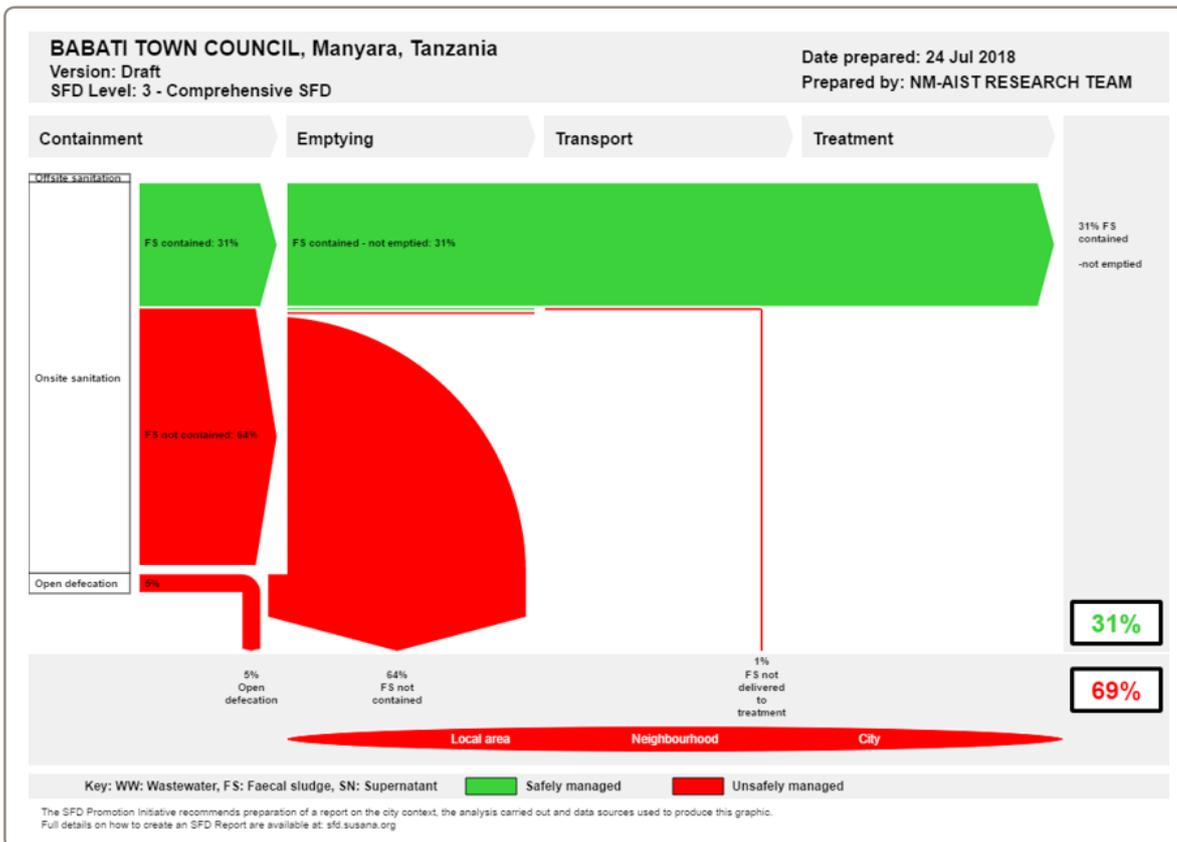


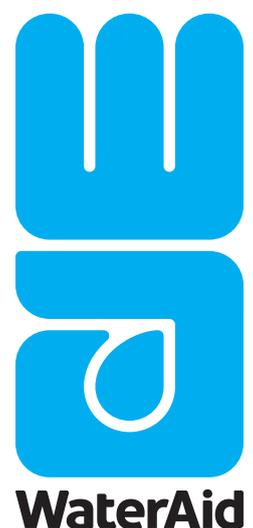
Figure 1 - Babati's SFD

In terms of hygiene, though most people were aware of the importance of hygiene behaviours only 21% of households had a handwashing station present. The most common method mentioned for treating water was boiling (82%) followed by chlorination (66%) though only 45% of respondents said they treated their water. Various unhygienic menstrual hygiene practices were also reported.

Policy and institutional arrangements

Government agencies such as Babati Town Council (BTC) have the mandate to make by-laws and enforce them.

There are several departments within Babati Town Council involved on sanitation but with no clear channels of communication between them. There is often duplication of effort and lack of institutional memory. During research for the PEA of Babati, it was found that barriers to sanitation investment are financial incapacity, planning problems, challenges in enforcement of regulations, lack of political will and lack of a clear regulatory framework.



Financing: source and main determinants for investment

Nationally politicians often do not see the value of investing in sanitation as it does not generate political influence. This means that investment in sanitation by the LGA can only happen if political leaders are triggered so that they feel the same community pressure to invest in it as they do for solid waste management.

BTC receives directives and guidelines from central government on budgets and spending. Allocation of funds are determined by local ward development committees but, with limited awareness of sanitation, the issue gets deprioritised. BTC therefore must use its internal income to fund sanitation investment. Before the project, around 3% of the town council's budget was spent on WASH annually.

It was found during this project that household's investment in sanitation and hygiene appears to be influenced by their education level, which is linked to their perception, household incomes, and availability of other services such as water supply. However, the key motives that influence a household's decision to invest in improved toilets or use a toilet of any kind include enforcement of existing rules and regulations, fear of disease outbreaks, comfort, raising social status, and a need to have a safe place for defecation/urination (safety) especially for children.

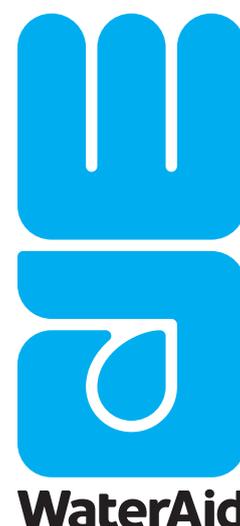
For institutions (LGAs, NGOs, Private Sector, etc.) good governance is the most important condition to enable participation and investment in improved sanitation and hygiene. Good governance ensures effective institutional coordination, capacity building, a clear roadmap to desired policy goals, and allocation of financial resources, civil society engagement and presence of enabling legislation (laws and by-laws).

Scenarios proposed for sanitation and hygiene

The development of the scenarios was preceded by the adoption of a vision for the city of Babati. Several sanitation and hygiene options were then submitted to the appreciation of the main actors (central government officers, local government representatives, community representatives, researchers, private sector representative, WaterAid team, and other sanitation and hygiene practitioners). It is worth noting that the selection of the scenarios was done by all participants after a SWOT analysis of Babati regarding sanitation and hygiene and a detailed presentation of the pros and cons of each of these scenarios as well as the conditions for the implementation of each of them.

The three scenarios proposed for sanitation are:

1. FSM – a system approach including technologies and mechanisms for containment, emptying, collection, transportation, treatment, disposal and/or reuse of sludge produced in onsite sanitation systems.
2. Sewerage – collection network with wastewater transported in big pipes to a treatment plant.
3. Alternative sewerage – decentralised-driven approach for management of wastewater



The scenario selected was FSM, which has many advantages:

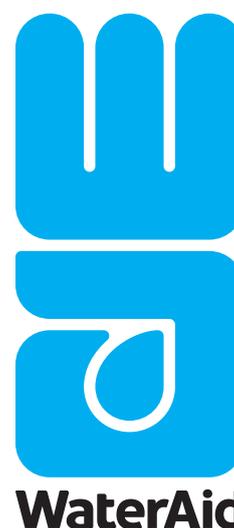
- Affordable in operation and maintenance
- Easy to manage
- Less energy consumption
- Cost-effective sustainable solution for urban sanitation
- Doesn't require huge capital expenses to be arranged like sewer-based solutions do
- Potential for use of end products for agriculture and energy
- Room for innovations.

The proposed hygiene scenarios were:

1. Mainstreaming/comprehensive approach – implemented through ongoing WASH programs and focused at household level interventions.
2. Integrated approach – bringing together health, education, nutrition, agriculture and private sector and delivered through institutions.
3. Campaigning approach – implemented in nationwide or district/town-wide manner in a short interval using centrally designed campaigns.

It was agreed to combine the mainstreaming and integrated approaches.

The selected scenarios were said to be well aligned with the Babati Masterplan.



4. Success factors

Involvement of local government in data collection

The involvement of local government officials in data collection increased the studies potential to reach almost all dwellings in the town and their participation in formative research ensured their acceptance of the results and helped the research to be fed into the planning process.

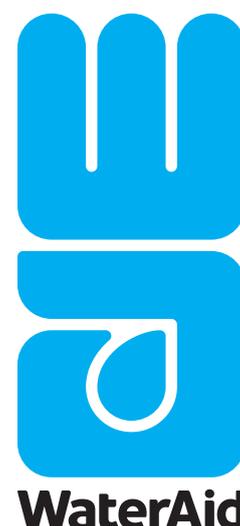
The partnerships

Identification of relevant partners is of paramount importance in the scenario planning process. WaterAid in partnership with NM-AIST, BTC, BAWASA and the Manyara Regional Secretariat led the participatory planning process. Each partner played an important role:

- NM-AIST was co-leader and responsible for all research elements. They ensured that data collection and analysis was rigorous and formed a reliable basis on which to develop sanitation planning scenarios.
- BAWASA provided technicians, experts, and local knowledge on water and sanitation issues.
- BTC was able to facilitate, enabling other partners to do their work by providing information they need and linking them up with stakeholders as required. They could also communicate well with the community and developed a good and existing relationship with them.
- Manyara Regional Secretariat coordinated and supervised the implementation of research and enhanced participation and accountability of Babati Town Council and BAWASA in the research process.

Stakeholder mobilisation

The involvement of all relevant stakeholders was a strong success factor. Indeed, the project was introduced to all stakeholders and the project team set objectives to see behaviour change in those stakeholders through the life of the project. In order to meet these objectives stakeholders were engaged throughout, taken on learning visits to other towns and invited to all key project meetings. One result of the exchange visits was that BTC and BAWASA directors were able to see the success of non-sewered approaches to sanitation and changed their mindset on FSM.



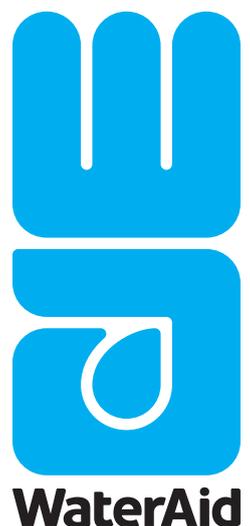
Capacity building

It was critical to build the capacity of actors especially those from university in order to guarantee the quality of data gathered and their analysis. The research project has helped to build the capacity of partners in several areas:

- a collaboration with the University of Leeds has helped the team to develop the Shit flow Diagram for Babati Town;
- two master students from NM-AIST completed research work and publications as part of the Babati research project;
- the participation of BTC and BAWASA team in the entire research process helped to build their research and planning skills. From an initial financial motivation in the project by BAWASA developed over the first year into a deeper motivation linked to the potential capacity gains for their staff;
- with support from SHARE, training on qualitative data analysis was provided to the research team;
- constant technical support to the research team has been received from the SHARE director of research.

Communication and advocacy

Engaging key ministries and stakeholders at each stage of the research process was critical in ensuring ownership of the project and research findings. Babati Town Council and Babati Water and Sanitation Authority (BAWASA) are now in the driver's seat to ensure selected sanitation and hygiene options based on research findings are implemented. BAWASA have now integrated sanitation in their business plan and are working hand in hand with WaterAid and other stakeholders on how to implement FSM with a focus on looking for funds to support this initiative.



5. Opportunities for progress

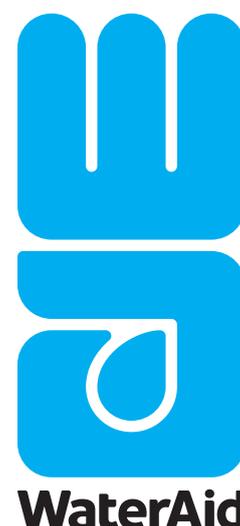
The following factors were important features of Babati town, which helped, make the project successful:

- Clarity of the mandate of local authorities in sanitation service delivery,
- Commitment of Babati Town Council and the Regional Secretariat to improve the sanitation condition of the town,
- Presence of WASH champions at BTC level,
- Opportunities for capacity building,
- Ongoing process of planning,
- Donor's interest in the city,
- Linkage between researchers and decision makers.

6. Scalability

Solutions must be context specific and based on accurate data, though it is acknowledged that the formative research conducted for this project was too arduous and expensive to be replicable in a sustainable way in other towns. Financing can be a limiting factor and therefore exploring the possibilities of light financing is an option as donor money may not be available always to fund research work. It is therefore important to lighten up the data collection process by relying as much as possible on secondary data and complementing it with in person data collection when needed.

In addition, the development of any masterplans should be done, for a better coherence, after the scenario planning process. This would allow good integration of the solutions identified and proposed in a participatory way to the general development plan of the town, which would in turn facilitate their appropriation, by the different urban actors. In the case of Babati, for example, the process was reversed, and engineers involved in a different planning process had unilaterally proposed a sewerage network for the whole city. Once the two projects were aligned, the actors realized that this was unfeasible due to the limited resources of BTC and BAWASA.



7. Conclusion



Urbanisation, while presenting many opportunities, can also present many challenges. This research has helped to demonstrate the importance of embedding WASH systems in town planning. It has also illustrated that effective planning, and stakeholder collaboration can help to ensure small cities have sustainable access to sanitation and hygiene.

Involving all the actors, including the populations, in the definition of hygiene and sanitation scenarios adapted to their context conditions the appropriation of the proposed solutions. However, the effective implementation of these solutions, through the mobilization of financing, whether national or international, is the best indicator of the success of the agreed approach developed. Therefore, advocacy must be maintained and reinforced for the mobilization of donors and key actors around funding and implementation.

Acknowledgements

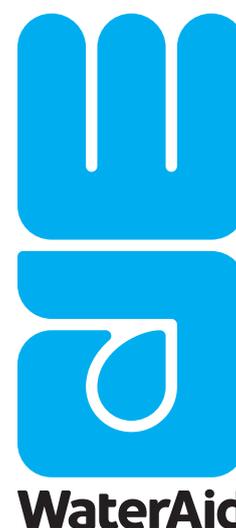
Note written by Mbaye Mbéguéré (Programme Support Unit, WaterAid UK) with valuable inputs from Kyla Smith and Om Prasad Gautam (PSU). Special thanks to Remi Kaupp (PSU) for his contribution, to Joseph Banzi and Abel Dugange (WaterAid Tanzania), to the NM-AIST team and to Joanne Beale for her participation in the project documentation.

Acronyms

BTC	Babati Town Council
BAWASA	Babati Urban Water Supply and Sanitation Authority
FSM	Faecal Sludge Management
LGA	Local Government Authority
NM-AIST	Nelson Mandela African Institution of Science and Technology
PEA	Political Economy Analysis
SFD	Shit-Flow Diagram
SHARE	Sanitation and Hygiene Action Research for Equity
SWOT	Strengths, Weaknesses, Opportunities and Threats Analysis

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More information

You can find more information on WaterAid and sanitation at <https://washmatters.wateraid.org/small-town-sanitation>

This is part of a series of learning notes on small town sanitation with the link above.



▲ Presentation of the Shit-Flow Diagram to authorities in Babati

