

POLICY BRIEF

Disease Prevention through Behavior Change

Executive summary

Just about 80% of Tamale residents have access to sanitation facilities; 20% of the population uses open drains and other open spaces, or private toilets in surrounding areas at a fee. Disposal facilities for faecal sludge (FS) and other solid waste generated in markets and households are limited. Poor hygiene behaviours and practices among city residents compound the situation and this exposes people to a number of preventable diseases. The four top proposals in the Tamale DP focused on fighting disease. Since behavior change alone can have a huge effect in disease prevention, a collaborative effort involving health, environment and sanitation agencies can promote and sustain behavior change especially among school children.

Context and problem statement

Tamale is the fastest growing city in West Africa. The majority of its over half a million people are engaged in agriculture and agriculture-based livelihood activities. As a result of rapid population increase, agricultural lands have been converted for residential purposes and this makes land for farming increasingly scarce. Alternative livelihood opportunities are also woefully inadequate. Over half of the population (52.6%) is unemployed (PHC, 2000).

The majority of sanitation facilities in the Tamale Metropolis are aqua privy toilets and KVIPs (93%). These are located in the central business area of the Metropolis where they serve about 80% of the population. This means that much of the remaining 20% of the population uses open drains, private toilets in surrounding areas at a fee or engages in “free range” or open defecation. Besides an insufficient number of toilets in the Tamale Metropolis, disposal facilities for faecal sludge (FS) and other solid waste generated in the market and households within the city centre are also limited. This leaves a backlog of 594 tons uncollected, resulting in the heaping of waste, overflowing of skips and turning communities in the inner city (e.g. Mossi Zongo, Hausa Zongo, etc) into slums. Increased commercial and light industrial activities within the Metropolis will further lead to the generation of more plastic, metallic and organic waste in commercial area of the Metropolis and agricultural waste in the peri-urban areas. Much of the waste generated in the metropolis ends up in open gutters which blocks water passage and increases the metropolis’ vulnerability to floods. Besides, the wastewater that

collects in the gutters serves as an ideal breeding ground for mosquitoes. This increases the incidence of malaria, which holds a trophy for being the number one killer in Ghana; malaria is the leading cause of death in children under age five in Ghana and 45% of all outpatient hospital visits are malaria-related. Among pregnant women, malaria accounts for 14% of outpatient hospital visits, 11% of admissions and 9% of deaths.

Using the Deliberative Polling® (DP) method, the West Africa Resilience Innovation lab at the University for Development Studies convened a random sample of 243 residents in the Tamale metropolitan area to discuss these issues and make concrete proposals for action. Deliberative Polling is a citizen-based data generation method developed by Jim Fishkin, a professor of Communication at Stanford University in the United States of America that seeks to contribute to the process of developing interventions that respond to the felt needs of the people. The Deliberative Polling® concept is thus described as *the gold standard for consulting the people on development issues*. The DP process samples peoples' opinion before and after they have had the opportunity to thoroughly discuss the pros and cons of various policy options in order to prioritize issues for action. Briefing materials were developed around Water, Sanitation and Hygiene (WASH), and Livelihood Diversification to provide deliberators with accurate and comprehensive information to guide the discussions. A video version of the briefing materials was developed to enable those who could not read and write effectively participate.

The Tamale Deliberative Poll, the first of its kind in West Africa, enabled residents debate and prioritize policy options for addressing the daunting challenges of a rapidly urbanizing city. From January 10-11, 2015, deliberators gathered at the Dungu campus of the University for Development Studies, discussed and prioritized policy options. Out of 39 policy options tabled for discussion, 28 recorded major changes in opinion between before-deliberation and after-deliberation. The deliberators, who were scientifically randomly drawn from among residents of Tamale, opted for appropriate technology based on efficient management of water, including rainwater harvesting, water treatment, recycling and reuse. They also prioritized diversified livelihoods through improved agriculture and backyard poultry and vegetable farming. A report that reflects the voices of the people is available online at www.warilab.org.

Policy options

In order to take the DP voices forward, experts at an Innovation Strategy Workshop (ISW) studied the policy options and identified three intervention pathways inter alia: Water, Sanitation and Hygiene (WASH); Agricultural Practices and Marketing; Livelihood Diversification and Financial Inclusion. Afterwards, a multi-sectoral team of experts, using the Collaborative Resilience Innovation Design (CRID) approach, critically examined the intervention pathways. They concluded that, in designing resilience



innovations with potential transformational impact, priority should be placed on projects that address challenges across the three pathways. It was also agreed that waste was no longer a nuisance but a resource. Among others, the experts recommended interventions that support multiple uses of water, and proper waste recycling into organic fertilizer. They called for a business model that enables Metropolitan, Municipal and District Assemblies to enter into partnership agreements with the private sector to develop businesses around; Water, Sanitation, Hygiene and Health; improved Agriculture and Markets; and Livelihood Opportunities.

Following the deliberations, the top four policy proposals out of 39 focused on fighting disease. These are noted in Table 1.

Table 1: Fighting Disease

Proposal	T1	T2	T2-T1	Sig.
39. Promote public education for effective cholera control	9.46	9.71	0.25	0.001***
37. Implement a systematic plan to control mosquitoes	9.09	9.52	0.43	0.001***
34. Ensure regular de-silting of gutters	9.24	9.51	0.27	0.005***
27. Intensify the hand washing campaign in schools	9.26	9.51	0.25	0.008***

Note: The survey results presented are means from pre deliberation and post deliberation, with the different between the post and pre deliberation mean and statistical significance. All questions are on a 0 to 10 scale, where 0 is extremely unimportant and 10 is extremely important. Significance below 0.01 is indicated with “***”, below .05 with “**” and below .10 with “*”.

Malaria is the number one killer in Tamale and a systematic plan to eradicate the breeding grounds for mosquitos could help combat it. Regular de-silting of gutters would be an important component. Diseases such as Cholera and Typhoid fever are spread by fecal waste getting into food, a by-product of inappropriate sanitation practices. Regular hand washing with soap, especially after visiting the toilet, would help combat cholera and dysentery and related diseases. Sensitization in schools would not only combat such diseases, but also establish good practices for a lifetime among the school children.



The status quo

The enforcement of sanitation laws in the metropolis is not effective. Many homes still lack proper waste disposal facilities and toilets even though the law obligates every home to have proper toilets. Public toilets are also poorly maintained and constitute a health hazard. Whereas sanitation infrastructure is woefully inadequate, indiscriminate disposal of refuse remains an unwholesome hygiene practice among the people. The use of insecticide treated mosquito nets has significantly improved in the metropolis but many vulnerable groups including women, children and pregnant women do not have use mosquito nets and those that have do not have the habit of sleeping in them every night. This constantly exposes city residents to mosquito bites and therefore malaria.

The proposal

All the four top policy options following the deliberations by the people should be implemented. They are not overwhelming in cost but rather require concerted political will and community organization. They are:

<i>Promote public education for effective cholera control</i>
<i>Implement a systematic plan to control mosquitoes</i>
<i>Intensify the hand washing campaign in schools</i>
<i>Ensure regular de-silting of gutters</i>

Action

The educational authorities should intensify the School Health Programme (SHEP) to teach school children proper hand washing improve good hygiene behaviours and practices among. The Ministry of Health, the Ghana Health Services, and the environmental health division of the district political authorities would be instrumental in the design and implementation of behavior change communication activities in schools.



Sources

1. Tamale DP Briefing Materials
2. Tamale DP Report: “What people say when they truly speak: Results from Ghana First Deliberative Poll.” 2015
3. RAN Collaborative Resilience Innovation Design (CRID) – Report: A powerful alternative approach to developing system level innovations aligned to RILab Intervention Pathways March 26-27, 2015, West Africa Resilience Innovation Lab (WA RILab), Tamale, Ghana
4. Ghana Population and Housing Census (PHC) 2000

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