

SLURC/DPU Action-Learning Alliance

Strategic pathways to disrupt risk in Freetown

MSc Environment and Sustainable Development
Practice Module 2019-20

POLICY BRIEF N^o4

Key points

- The current formal system of water and sanitation in Freetown fails to deliver adequate services to 3/4 of the population (Oxfam, 2017). The gaps are filled by an existing decentralised system comprised of informal vendors, service providers and intermediators. However, this needs-driven provision is unsafe, unreliable and expensive, which creates a heavier burden for the most vulnerable groups.
- Recognising informal initiatives to promote community-led and pro-poor market solutions in WASAN can lead to transformative outcomes such as the offer of affordable service, decrease in the burden related to water collection, improvement in the quality of water and inclusion of marginalised groups in the decision-making process. It addresses underlying causes of the risk cycle and promotes environmental justice.
- Taking into consideration the existing initiatives and utilities in Freetown, five entry points are introduced by this Policy Brief: a) co-production of services; b) provision of locally adequate facilities; c) knowledge sharing; d) update of regulatory and policy framework; e) mobilisation of decentralised funds.
- The entry points aim for disruption of underlying causes of risks related to WASAN in Freetown, namely: the exclusion of informal organisations in the planning and decision-making process; the tendency for misallocation of centralised funds; neglected existing coping strategies by local authorities; a weak regulatory and policy framework.

Decentralised Water and Sanitation (WASAN) Infrastructure and Services



Figure 1: People carrying water in Sierra Leone, UNICEF, 2015.

Introduction

Freetown currently has a gap in its provision of water and sanitation (WASAN). Guma Valley Water Company (GWVC) reaches only 55% of the urban area (PEMconsult et al., 2014; as showed in Figure 2) and due to pipeline leakages, contamination and intermittent service, about 33% of the population lack access to clean water through this system (Oxfam, 2017). The distance of water sources is particularly hazardous for women and children, who are exposed to physical hazards, sexual violence and consume more time collecting water. The situation is not so different for sanitation. Only 23% of Freetown's inhabitants have access to improved sanitation and shared toilets are usually overcrowded (Oxfam, 2017). The consequences are a higher exposure to waterborne diseases and impacts on the quality of life of the people of Freetown. The residents that do not have access to the formal system have developed alternative strategies to survive. They rely on informal water providers to fulfil their basic needs, such as sachet and bottled water vendors, cart operators, water kiosks, and

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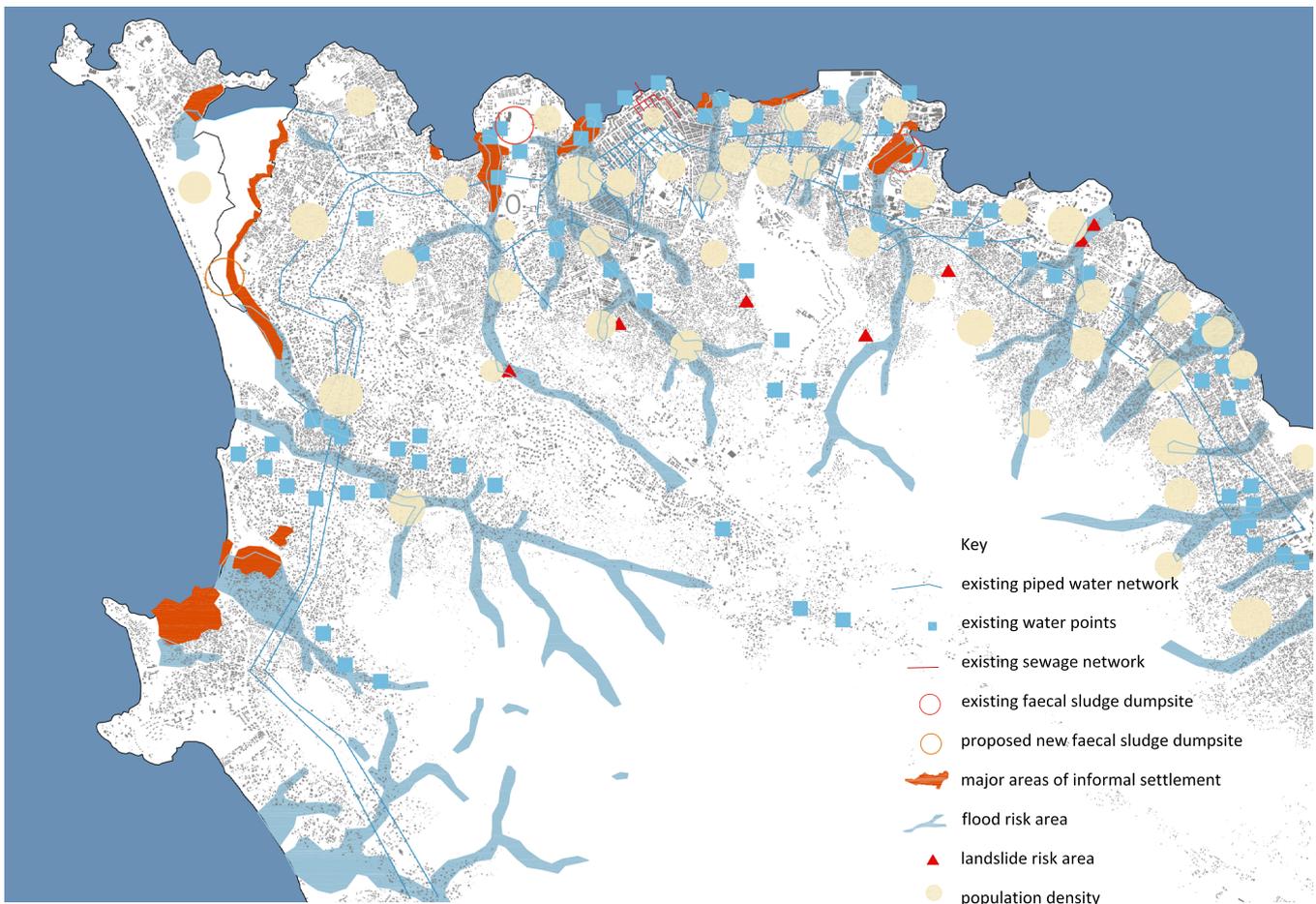


Figure 2: Existing WASAN services overlaid with risk drivers in Freetown. Data retrieved from ARUP and World Bank. Map developed by authors.

standpipes or wells (Harris et al., 2012), while open defecation and latrines rarely emptied by informal professionals are the most common solutions for sanitation. However, this actual existing decentralised system also fails to provide reliable, safe and affordable WASAN. This system driven by the needs of underserved citizens creates unintended consequences that impact mainly the most vulnerable people. One example is that the poor in Freetown need to pay 100% more than people with access to piped water (Harris et al., 2012).

The WASAN gap engenders a risk trap, i.e. risks that build up over time, making each worse over time (Cardona et al., 2012). It affects certain groups disproportionately since they are subjected to higher environmental risk than others, experiencing burdens which others do not. The low-income population is less capable of coping with environmental risks and lives in vulnerable conditions. Dense informal settlements and overcrowded sanitation facilities increase the frequency and severity of water-associated infectious disease outbreaks (Yang et al., 2012). Figure 2 shows a map of Freetown existing services, the population density and the risks related to WASAN. Citizens without political power or education, or those in

informal settlements, often have limited capacity to change their exposure to hazards in a sustainable manner. From this background it is possible to identify some

of the underlying causes that create a risk trap in Freetown: the exclusion of informal organisations in the planning and decision-making process; the tendency

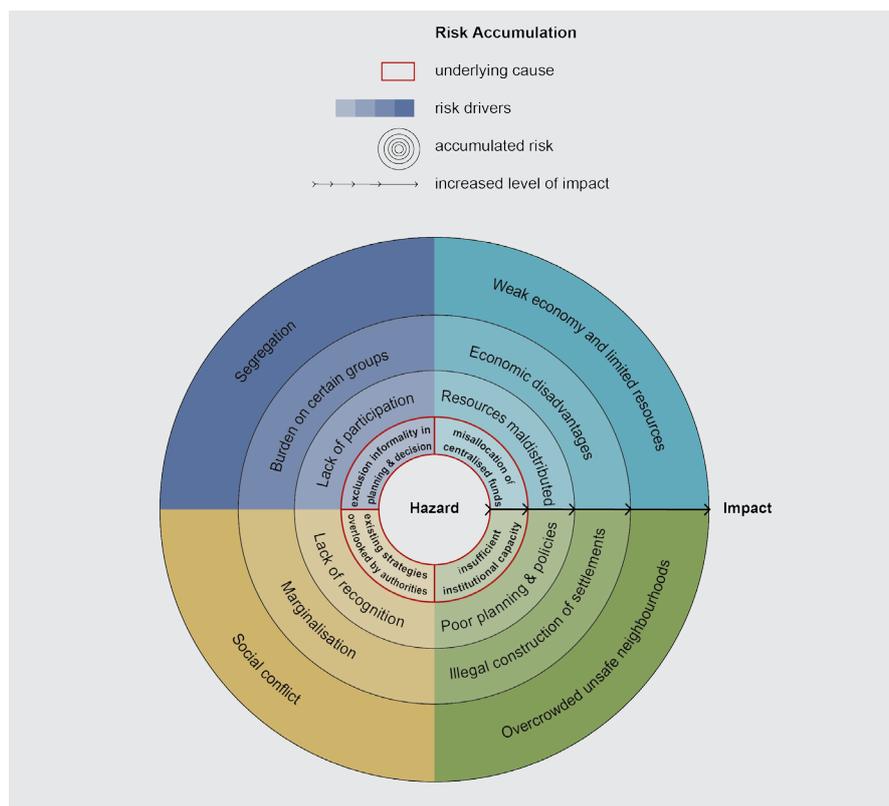


Figure 3: Risk accumulation diagram.

for misallocation of centralised funds; existing coping strategies are overlooked by authorities; a weak regulatory and policy framework. The accumulation of risk is represented by the diagram in Figure 3. Following this, a brief overview of the current WASAN system in Freetown is given. Next, the main body of this paper explores five key entry points for the improvement of decentralised WASAN services. Finally, the paper concludes by exploring how these suggestions might be implemented in Freetown and makes suggestions for next-steps for the mayor.

1. Action Framework

Acknowledged as a human right, the WASAN gap became one of the central points in Transform Freetown strategy. Addressing this issue is also a way to comply to global agendas, such as the United Nations Sustainable Development Goals and particularly the Goals 6 (Clean water and sanitation) and 11 (Sustainable city and communities).

The current provision of water and sanitation in Freetown already presents a patchwork of formal and informal providers. Allen, Dávila and Hofmann (2006) present a useful framework for understanding the present situation. By analysing the WASAN system in five peri-urban areas of the Global South, they categorise the identified initiatives into a spectrum of needs-driven or policy-driven actions. Likewise, the initiatives of water and sanitation provision in Freetown are mostly uncoordinated and fragmented, driven mainly by the needs of those who find themselves excluded from the formal

system. A classification of the current initiatives can be observed in Figure 5. It makes explicit the logics and practices that enable the access to resources that could not be obtained through conventional ways led by a centralised government. It also shows how a more collective management of the same resources can be led by both competitive or collaborative rationalities.

This policy brief aims for the recognition of already existing initiatives in Freetown and their articulation within the formal system. It presents strategies to help Freetown's City Council to take advantage of opportunities in the informal sector and build a coordinated network of services and providers. The guarantee of the right to water is conceived as the development of mechanisms that enables citizens to have access to this resource in a safe, reliable and affordable way (O'Keffe et al. 2015). The development effort should be guided by principles that promotes a socio environmental just perspective on WASAN, such as:

promotion of community development, promotion of equity, propagation of prosperity, standardisation of quality in service provision and nourishment of resilience. Therefore, the policy must prioritise the most vulnerable groups, so that water and sanitation are not just a commodity accessed by a privileged minority in Freetown. In summary, the improvement of a decentralised system needs to fulfil social and environmental collective functions (O'Keffe et al. 2015). The migration from individual mechanisms to a more collective perspective has a positive impact on citizens' livelihoods because it socialises the cost of WASAN provision instead of posing the burden on the most vulnerable individuals. Benefits from moving from individual initiatives to collective ones:

- Decrease the burden on children and women;
- More affordable services;
- Standardised quality of services;
- Inclusion of marginalised groups in the decision-making process;
- Sustainable water and sanitation structure

Initiatives progressively more incorporated into public policies can be achieved both through the community or private actors (Figure 4). Rather than a top-down approach, collective way of water and sanitation development results in an effective method of changing the current rationality. This policy brief proposes that the responsibility of Freetown's government is steering the network of providers, rather than to providing a centralised service. Thus, one of the critical tasks of

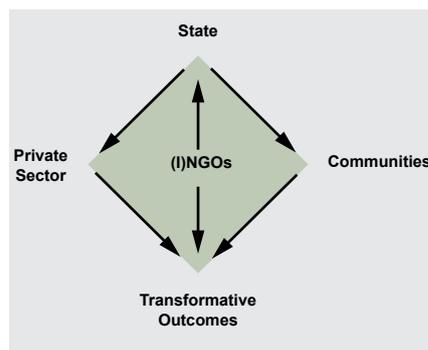


Figure 4: Promotion of transformative outcomes through community or private-led initiatives.

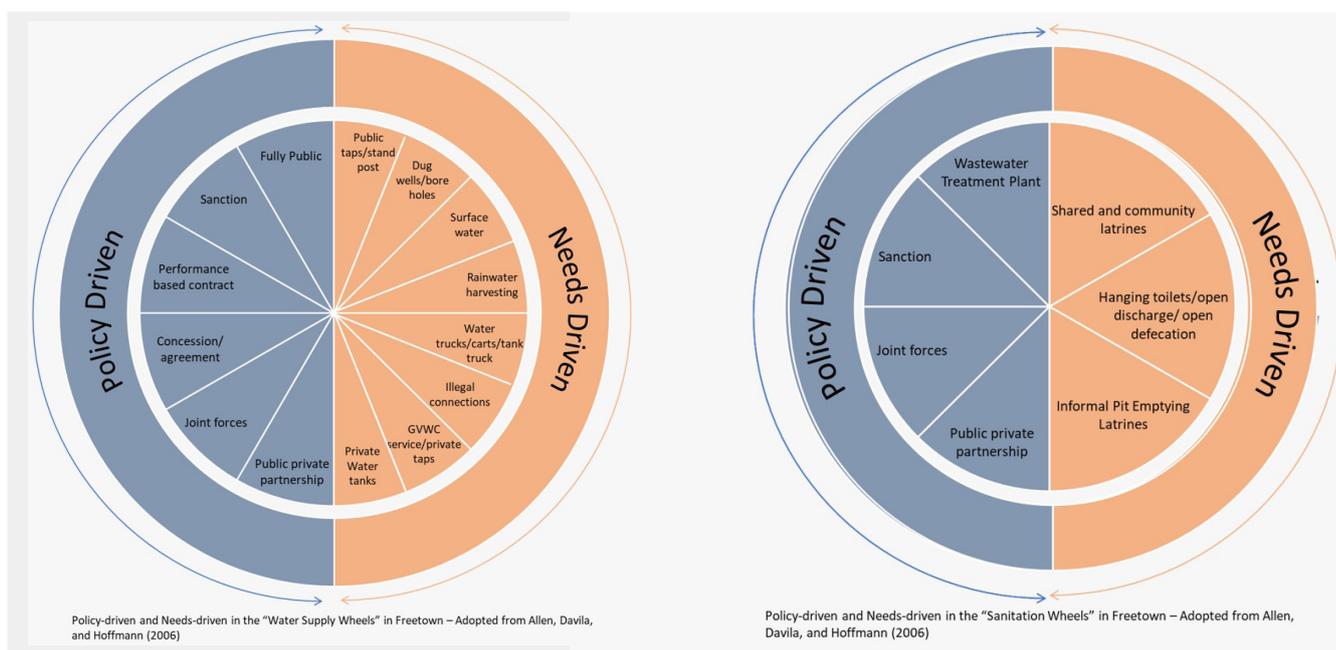


Figure 5: Policy driven and needs driven initiatives for water and sanitation in Freetown.

the public sector is to foster innovations in the pro-poor market of small-providers (Solo, 1999) and to encourage community-led and co-produced solutions. Informed by successful study cases, four entry points are distinctive paths for an incremental transition. They strengthen collective and collaborative ways of accessing resources, avoiding the traps of competitive rationalities that exclude the low-income population, as exposed by the wheels of water and sanitation (Figure 5). They anchor in within the existing initiatives and projects aiming to create synergistic outcomes that bring environmental justice. Also, the entry points address some of the main drivers of the identified risk cycle. Addressing the risk drivers promotes not only an equal distribution of natural resources but also greater political participation and recognition of the groups that currently carry the most onerous burdens.

Entry points:

- a) co-production of services;
- b) provision of locally adequate facilities;
- c) update of regulatory and policy framework;
- d) mobilisation of decentralised funds

2. Entry points

2.1 Co-production of services

Co-production of services is defined by Ostrom (1996) as “the process through which inputs used to produce a good or service is contributed by individuals who are not ‘in’ the same organization”. Collaboration between different sectors can improve the quality of services, especially in decentralized systems. Freetown could benefit from a scheme designed, implemented, and managed with inputs from the residents who will be accessing

and running them (McGranahan & Mitlin, 2016). Doing so it is possible to bring together a diverse range of stakeholders to share needs, information, ideas and knowledge that make context-specific solutions. The negotiation of objectives among affected groups to reach the common goals reduces potential conflicts and promotes effective cooperation, accountability, sense of ownership, flexibility in decision making, as well as enhances the compliance.

From the experience in India (see Box 2), it is possible to consider the feasibility of collaborative designing and building processes. It enabled the construction of WASAN facilities with limited financial resources. The active participation of dwellers in the project of WASAN facilities enabled the identification of their specific needs under a rationale of collective response. The responsibilities were shared among different actors, involving unskilled labour to build shared toilets, civil society organization Mahila Milan and the National Organization of Slum Dwellers (NSDF) to promote the community organization and political sway, whilst the NGO ‘SPARC’ contributed professional knowledge (see 'c) Knowledge sharing'). Therefore, the collective work between the community, civil society organizations, the NGO and local government, increased the recognition of their residents and improved the co-productive relationship between the different actors, ensuring contributions from the government. Drawing on the monitoring component of the Maputo Project, it is possible to consider organisations including traditional and local authorities that exercise a permanent press both downward and upward between the community members and the local authorities, to preserve

appropriate sanitation standards and for the provision of necessary complementary inputs (WSUP, 2018). In Freetown, there are already sites with community-managed facilities, such as the free toilets in Colbeh Wharf (DPU, 2019). These sites provide opportunities to promote co-production which could further disrupt risk in these areas – namely, building capacities in the community to address WASAN issues, communicating to the authorities their needs and working together with the local government to provide more adequate services.

In addition to community-led practices, co-production can also happen between the state and local entrepreneurs or small-scale providers. In the case of Maputo (see Box 1), the project conducted by the social enterprise ‘Water and Sanitation for the Urban Poor’ (WSUP, 2018) in collaboration with the Maputo Municipal Council (CMM). The programme was intended to address the gap in Faecal Sludge Management (FSM) through the support to new FSM operators. Members of the Mozambican Association of Micro-Enterprise Service Providers (small-scale private sector) which already had experience emptying faecal sludge were supported with technical assistance, provision of equipment, technical capacity development and training to operate efficiently and deliver a hygienic service which ensured that faecal sludge are disposed safely (ibid.). The new small-scale operators, their service adapted to the physical and economic conditions, and the improved capacity of the private sector increased the level of satisfaction of the users of the sanitation facilities (ibid.). It introduced a different logic in the private provision, diverging from the model based on large-scale providers towards a

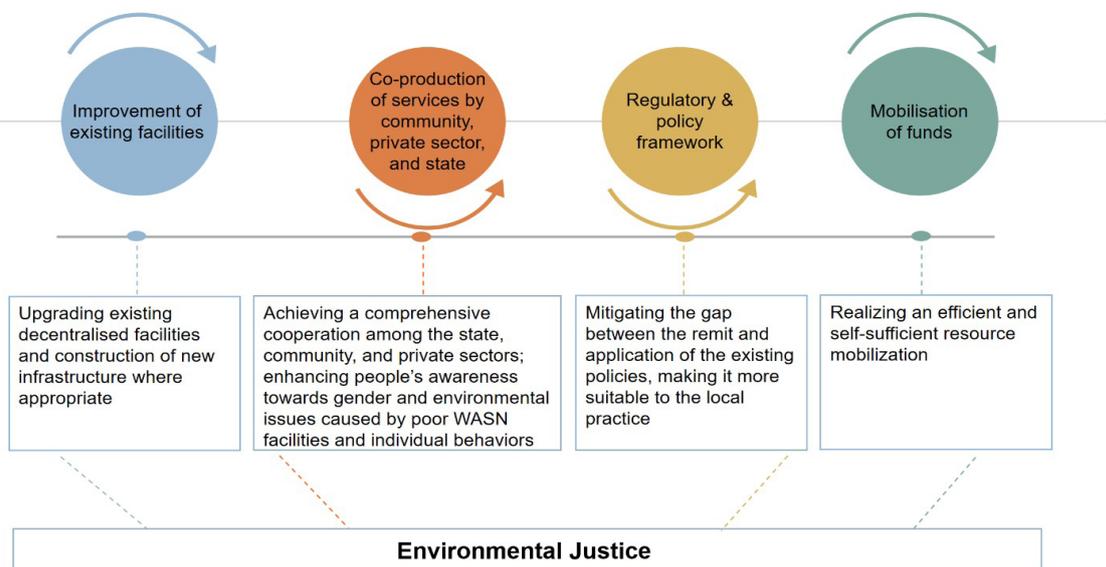


Figure 6: Entry Points leading to Environmental Justice..

BOX 1: WSUP Project in Maputo, Mozambique

The project, conducted by the Water and Sanitation for the Urban Poor (WSUP) and the Water and Sanitation Program (WSP) of the World Bank in Maputo, was funded by the World Bank-managed Japanese Social Development Fund (JSDF) and aimed to involve the Maputo Municipal Council (CMM) and the small-scale private sector in the sanitation services improvement through three main activities: The implementation of sanitation infrastructure: The built facilities included two types of infrastructure: Communal Sanitation Blocks (CSBs) and Shared Latrines. Development of new faecal sludge management (FSM) operators: Members of the Mozambican Association of Micro-Enterprise Service Providers which already counted with experience in emptying faecal sludge were supported with technical assistance, provision of equipment and technical capacity training. Community-level sanitation and hygiene promotion and monitoring: In low-income neighbourhoods, leaders and sanitation activists received training in "hygiene promotion methods and skills to enable household sanitation and hygiene monitoring". (WSUP, 2018)

pro-poor service offered by locals.

This form of collaboration could have positive effects in Freetown. Informal FSM in the city consists mainly of manual pit emptiers (Parikh et al., 2016). Currently, they do not have a good reputation, and only 17% of sludge goes to an appropriate disposal point. Further, according to Parikh et al. (2016), manual desludging customers had low levels of satisfaction with the service. In this point would be suitable to count with a programme that continue the GOAL efforts made in this area in Freetown, establishing partnerships between manual and mechanical operators as suggested by Mikhael (2011), but also including the existing small-scale private providers and local authorities in the management of the sanitation system.

2.2 Mobilisation of funds

The current WASAN system in Freetown is not financially sustainable without outside investment (Harris et al., 2012). The lack of revenue stream hinders sustainable maintenance from providing reliable and safe water quality and quantity (Ibid). Additionally, beyond this failing centralised infrastructure, funding for improvements to decentralised practices is quite limited. For the decentralised WASAN system to improve, efficient and self-sufficient resource mobilization is imperative. Whilst there is a large influx of funds coming into Freetown for WASAN upgrading, it is largely focused on improving centralised infrastructure such as pipes or sewers. Whilst this is useful, as mentioned in regulatory and policy framework section, there also needs to be concrete financial managerial plans for a sustainable

management of the WASAN system in Freetown. A harmonious plan of centralized and decentralization of the water system in Freetown is needed. Most subsidies from international organizations are geared towards state-led centralized plans. These plans do not mediate all the need-based issues in Freetown (ABD, 2019). Hence it is important to improve mobilization of funds in various facets such as, appropriately allocating the investment funds, considering its size and timing of the application, and ensure the costs are covered with meticulous plans for recurrent income.

Efficient fund mobilization can address two of the major problems facing current WASAN system in Freetown;

1. Reducing free-riders and
2. Increase in cost-recovery. Potential activities to improve fund mobilization of WASAN are as follows:

- Collaborate with Electricity and Water Supply Regulatory Commission to establish a national policy to reach an adequate balance of government subsidies and calculate the proper amount of cost-recovery utility charge. Form public-private partnerships with performance-based contracts to outsource water supply and regulate by providing the right incentives and penalties. Incentives encourage local entrepreneurs and develop a pro-poor market, whereas penalties promote transparency in services and transactions. Followings are possible intermediate strategies:
- Group the demography to have a better grasp of who can and should pay for different types of water services;
- Set local tariff and sanctions during development/implementation phase of community-based initiatives to prevent over-pricing of water;
- Utilize currently existing savings group to pay for WASAN services as self-funding will be a viable alternative when the savings are strengthened;
- Coordinate community-based efforts with the formal sector to secure cost-recovery of centralized water service and regulate the informal sector;
- Ensure compliance of both formal and informal water supply mechanism through local authority figure (Harriet et al., 2012);
- The management team of water kiosks in Freetown should promote other methods of payment such as tokens or stamp cards to stabilize water price as well as reduce the risk of violence (Solo, 1999). Customers can purchase the token up-front to trade for water later, even when the price of the token changed.

BOX 2: The Indian Alliance Case Study

The Indian Alliance is a partnership between national organization of slum dwellers (NSDF), a female saving group (Mahila Milan) and the NGO SPARC. Sanitation was a concern for all of them and the goal of the project was to implement community toilet blocks, a more affordable solution than individual toilets. The local residents contributed with the design of community toilet blocks (under a rationale of collective response) and unskilled labour to build them, the civil societies organizations Mahila Milan and the national organization of slum dwellers (NSDF) provided the community organization and political sway, whilst the NGO 'SPARC' contributed professional knowledge. In this instance, the community decided where and what kind of facilities they would build, according to their needs. The financing of the first community toilets was made through the savings of Mahila Milan (Patel, 2016), and after the successful cases in Mumbai the Alliance was supported economically by development assistance. Furthermore, the Alliance approached the local authorities and some of the negative imagery toward informal settlements was changed, and there was funding from the government for forthcoming projects. Therefore, the collective work between the community, civil society organizations, the NGO and local government, increased the recognition of their residents and improved the co-productive relationship between the different actors, ensuring contributions from the government (McGranahan and Mitlin, 2016).

BOX 3: Case Study of Lilongwe, Malawi

In 2004, the Lilongwe water utility established a low-income customer support unit called the Kiosk Management Unit (KMU) with the financial and technical support from international organizations and companies. The project analysed in this case study was proposed by WaterAid. It consists in the improvement and the management of the water kiosks, previously owned and managed by the central company. After discussing several governance arrangements, the Water Users Association model (WUA) was chosen and incorporated into the legislation of Lilongwe. The Water Kiosks were rehabilitated and the KMU was developed to be responsible for representing the concerns of users. WUA includes as representatives also the traditional authorities, representatives of religious bodies, the business community and community elders.

Water kiosks in Lilongwe provided reliable, safe and sustainable water to the locals and help kiosk management to develop and work effectively. However, there are still concerns related to the safety of the management teams as well as customers because they are trading using cash. Furthermore, due to the high demand of fresh water raw material, they have to build a third dam to keep up with the demand. The Malawi government later issued a National Water Policy in 2005 with the ultimate goal of providing equitable and commercially viable water and sanitation services for all. (WaterAid, 2016)

2.3 Provision of locally adequate facilities

Due to its high population density and geographical position between the mountains and the Atlantic ocean, Freetown has limited space for infrastructure development (Figure 2.). Further, the city relies heavily on international investment to develop this infrastructure (DFID, 2015). With these limitations in mind, upgrading existing decentralised facilities and construction of new infrastructure where appropriate offer an alternative route to improve WASAN services for many of Freetown's population. Small-scale systems such as community-managed water kiosks and communal sanitation facilities typically require less investment (though do still require appropriate funding) and can serve communities where there isn't space, funding, or impetus for centralised infrastructure; while prioritising community needs by using local knowledge.

Freetown has approximately 60 water kiosks installed by GWWC, and several informal water tanks provided by the private sector (Mojjue, 2016). However, most of these kiosks are not cost-effective because of the size of the installed storage tank and water browsers (Mojjue, 2016). Construction and enhancement of new kiosks and tanks will improve connectivity and accessibility to water, especially in the mountainous areas of Freetown where extension of pipeline network is not feasible at the moment.

In Lilongwe, Malawi (see Box 3), community-run water kiosks have been used to provide a reliable water supply to low-income and informal settlements. This approach may be suitable in Freetown due

to similarities in context: both are large cities with a high number of residents living in informal settlements with poor access to clean water (Mojjue, 2016; Wateraid, 2016). Quality and efficiency of water kiosks were improved through a series of revamping actions including replacement of meter and construction of meter boxes, improvement of drainage facilities at the kiosks, as well as increasing hydraulic capacity of the existing faucets and pipes (Wateraid, 2016). Each location has specific needs for improvement and innovation, thereby, Freetown should full investigate in the conditions of the facilities to address their own problems.

In terms of sanitation, access to sanitation remains a major problem among urban dwellers as 77% of the population doesn't own a private toilet (Atkins, 2008). Therefore, sharing sanitation facilities is considered the better alternative to open defecation for most of them (Ibid). Viable alternatives are the reconstruction of communal sanitation areas, public toilets and shared toilets, in residential areas and the town center of Freetown, and support to private sludge emptying service, avoiding the degradation of existing utilities due to overuse (Mazeau & Ramsay, 2019). Shared sanitation may be the only effective solution in densely populated low-income areas like Freetown, where lack of space precludes individual household toilets (Figure 2; WSUP, 2018). Communal sanitation areas have been implemented in Maputo with positives outcomes such as reduction in open defecation and elimination of latrines' smell, thus improving the environmental conditions and sanitation of their neighbours (WSUP, 2018). Freetown and

Maputo have shared characteristics including existing communal sanitation area, shared toilet between neighbours, and the sludge emptying serviced by locals, thereby, bringing the principles of this project to Freetown can be beneficial for the city.

Gender-related sanitation is a problem worldwide as many women have limited access to basic sanitation and safe water (UNICEF, 2019). Women and girls are especially susceptible to inadequate sanitation because of not only cultural and social factors but also of sex-related differences (UNICEF, 2019; WHO, n.d.). During menstrual, pregnancy and post-natal stages, the needs for adequate sanitation become even more crucial. Therefore, it is important to secure the right to water from improved sources and enhanced sanitation facilities. The shared-sanitation facilities and communal toilets should be usable, separated for women, safe to access, meet the needs of people with limited mobility, provided with basic hygiene materials (soap, alcohol, etc.) and allowing menstrual hygiene management (WHO, n.d.).

For the changes to provide transformative outcomes, local authorities should carefully investigate all aspects that can influence the project.

This Policy Brief recommends:

- Establishing community-based management teams, which should act as a mediator between the local communities, local authorities, private sectors, and GWWC.
- Rehabilitate communal infrastructure, replace worn-out equipment, as well as improve drainage facilities at the sites. The financial challenge can be addressed through the entry point e) mobilisation of decentralised funds'.
- The access to facilities should be equitable and inclusive to address the difference in demand of different groups, and the specific needs of the most vulnerable customers, including women, children, the elderly, disabled and customers living with HIV and AIDS.
- Map all facilities in the designated areas and build a database of their positioning and condition to help provide accurate information to determine the location and capacity of additional facilities if needed.

Furthermore, knowledge-sharing, defined as "a process where individuals mutually exchange their implicit (tacit) and explicit knowledge to create new knowledge", plays an important role in tackling facility development and gender-related sanitation issues (Virkus, 2012, para. 1). It helps enhance social awareness

towards environmental injustice different stakeholders with diverse requirements and expertise can be recognized during the process. In Freetown, women are currently the primary water collectors and often rely on children for help (DPU, 2019). Moreover, women face a particular set of location-based challenges, including travelling long distances to access water and sanitation services (Sommer et al., 2015). However, they do not get adequate attention during the construction of WASAN facilities. The lack of women's voice has in turn contributed to the low usage rate of the existing WASN facilities in Freetown such as the insufficient use of the free community toilet in Colbeh Wharf (DPU, 2019).

The India Alliance case mentioned in the co-production part is also a good example of raising people's awareness about gender issues in WASAN facility construction by increasing female participation ratio in its public hearing. This action then has helped the government to improve its construction scheme and the follow-up utilization rate. To be more detailed, some innovations such as the separate doors and queues for men and women and the two-way swing doors in those newly built community toilets in Mumbai were contributed by female residents in the public hearing (McGranahan & Mitlin, 2016). As a result, the incident rate of violence towards women and girls are controlled while the utilization rate is increased (McGranahan & Mitlin, 2016). However, it is worth mentioning that there is no regulations to guarantee the participation of different stakeholders in this case, leaving uncertainty for future knowledge sharing.

Besides, Freetown can learn from Maputo's training programs and improve its own sanitation system. In Nihamankulu District, leaders and sanitation activists received training in "hygiene promotion methods and skills to enable household sanitation and hygiene monitoring" (WSUP, 2018, p. 8). The programme included a capacity building training focused on correct facility usage and hygiene practices (WSUP, 2018). As a result, higher quality latrines gained popularity in target areas under the efforts of the community leaders who shared the knowledge they learned from WSUP to people in their neighbourhoods later on (WSUP, 2018). Meanwhile, the enterprise provided technical capacity training series to desludging operators to help them quickly master the equipment provided (WSUP, 2018). The operators were able to find available materials to repair the

equipment through the training which helped increase the service life of the equipment (WSUP, 2018).

2.4 Regulatory & policy framework

There already existing policy and regulatory frameworks in Sierra Leone to manage WASAN and the environment – the National Water and Sanitation Policy for the implementation of affordable water tariff/price and the Environmental Protection Act 2008 for environmental quality standards. However, these policies have not resulted in effective implementation for government, donors, as well as communities.

Freetown requires a regulatory framework which can accommodate both formal and informal, centralised and decentralised services. These providers should be completed with appropriate regulations and standards to ensure the quality, availability, and affordability. Centralized water system (GWWC) should also cooperate with the informal providers such as street vendors in order to distribute the water in the areas which are not covered by centralised systems and avoid unaccounted for water. The cooperation between formal and informal providers should be defined in agreement or concession. In Abidjan, Cote d'Ivoire, the population also lacked access to water, which costs them 20 times from private providers (Solo, 1999). To solve the problem, there is a concession between public water utilities and small-scale private water company called Societe des Eaux de Cote d'Ivoire (SO-DECI). SODECI has a right to control the resale price of water at public standpoints through the design of the holding tanks (Solo, 1999). The concession between public water utilities and private providers should be encouraged in Freetown, as the output of current Greater Freetown Water Supply and Sanitation Master Plan and Investment Studies is integrated urban water management coordination mechanism (AWF, 2017).

In order to implement the Environmental Protection Act 2008 in Freetown, the sanction should be enforced. In Cotonou, Benin, the enforcement of a fine contributed to obtain cooperation between formal and informal providers (Solo, 1999). SIBEAU, the Cotonou's wastewater treatment plant, invested their own funds in building a private treatment plant that receives sullage from septic tank truckers, which pay the unload to SIBEAU (ibid). The septic tank truckers will obtain the benefits from SIBEAU since they risk a fine if they are caught dumping illegally.

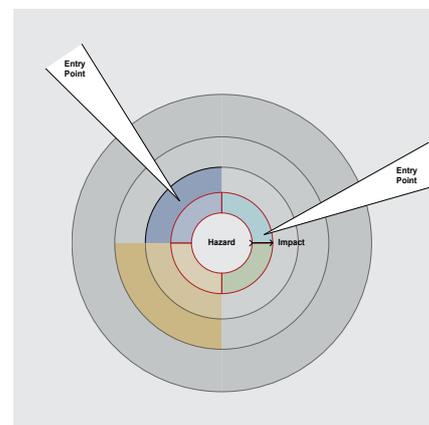


Figure 7: Disruption of risk trap through implementation of the entry points.

Conclusion

This policy brief provides decentralised WASAN as a strategic pathway to disrupt risks and secure environmental justice. The status quo of WASAN system exposes 3/4 of the population in Freetown to various environmental injustice of unequal access to clean and affordable water. The injustice transfers into risk drivers of urban poor in Freetown with an increased burden of physical hazards, exposure to disease, sexual abuse of women and children en route to and from water collection, and economic loss due to unfair pricing of poor quality water by private vendors to the poor.

Currently, existing informal sector plays a crucial part in filling the gap of the centralized system by providing decentralized water to urban poor. Nonetheless, informal initiatives, without recognition and collaboration from formal sectors such as government, international organizations, and NGOs, would not be as effective. This brief further explains on how to synthesize decentralized WASAN to break the risk cycle. By visualising the risk cycle, five entry points became clear: provision of locally adequate facilities, co-production of services, knowledge sharing, regulatory and policy framework, and mobilisation of funds.

In conclusion, the WASAN is a basic human right and is aligned with one of the central goals in Transform Freetown strategy, as well as Sustainable Development Goals. If collaborative efforts of the communities, governments and various organizations are continued, sustainable WASAN can be achieved.

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