

Non-payment in the Kenyan water sector: A political economy analysis

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Abstract

Water that is treated and delivered has a cost and water utilities require sufficient revenue from their customers, whether public or private to cover these costs. However, non-payment of water bills leads to missing finances and are causing several impacts on the utilities in terms of water supply generation and investments in water network expansion. In Kenya, an issue of non-payment of water bills does exist and arrears by public institutions often account for a high percentage of the total operating revenue of the utilities, contributing significantly to the financial and operational challenges faced by utilities and thus, undermining the human right to water and sanitation.

For conceptualizing the underlying causes and consequences of non-payment in the Kenya water sector, a specific focus was set to investigate on all sectors involved in the non-payment procedure to develop a comprehensive and evidence-based overview of the situation. In this regard, this research aimed at identifying the relevant actors, their interests and intentions behind paying the water bills or not based on cultural, intrinsic, economic and social circumstances as well as the most important financial flows in the water sector.

Causes for non-payment of water bills have been identified to mainly arise because of shortcomings in the money distribution/flow within the whole water sector but especially the delay of funds towards public institutions, poor governance within the water sector, the current handling of non-payment by policies and the metering or billing procedure itself. Among the consequences, poor performance of water utilities alongside poor service quality for public customers and the (illegal) usage of alternative water resources have been identified.

Keywords: Water Sector financing, Kenyan Water Sector, Human Right to Water and Sanitation

Introduction

Access to safe water and sanitation is declared as a human right (UN Environment, 2018). Nevertheless, worldwide, many households are not connected to a water network and lack access to safe drinking water. For an enhancement of the situation, water utilities are in the frontline to increase the number of water connections to households and to serve the population with a stable water supply. Water that is treated and delivered has a cost and utilities require sufficient revenue from their customers, whether public or private. Missing finances are causing several impacts on the utilities in terms of water supply generation. Financial viability is indispensable to sustainably maintain operating services and furthermore, to invest in water network expansion (WIN, 2020). Therefore, customers should receive water bills and are expected to pay them. However, the global evidence-based advocacy campaign “Governments pay your water bills!” which was conducted by End Water Poverty (EWP), the Water Integrity Network (WIN), together with SWIM - Solutions for Water Integrity and Management, found out that in 95% of utilities surveyed, an issue of non-payment by public customers exists (WIN, 2020). The campaign argues that arrears by public institutions often account for a high percentage of the total operating revenue of the utilities and that “collection rates are consistently lower for government customers than they are for private customers” (WIN, 2020). These arrears and low collection rates “contribute significantly to the financial and operational challenges faced by utilities” (WIN, 2020), often

preventing them to provide adequate service and hamper the realization of the human rights to water and sanitation (WIN, 2020).

The general aim of the research was to identify the causes and consequences of governmental non-payment of water bills in Kenya. The issue of non-payment by public institutions was assessed prior by the "Government, pay your water bills!" campaign and the political economy analysis was used to support the findings by identifying underlying structural causes and country-specific recommendations. Generally, a political economy analysis (PEA) is often used to improve development processes iteratively. Therefore, the following materials and methods aim at conceptualizing the underlying causes and consequences of non-payment in the Kenya water sector, by focussing on all sectors involved in the non-payment procedure to develop a comprehensive and evidence-based overview of the situation. In this regard, this research aims at identifying the use of political power by relevant actors, their interests, and intentions behind paying the water bills or not, as well as the most important financial flows in the water sector that have an influence on the operations of water utilities. Furthermore, to find out the root-causes of non-payment, the actors behaviour based on cultural, intrinsic, economic and social intentions was aimed to be evaluated.

Material and Methods

The analysis of the PEA started with a detailed qualitative literature review which covered the component of structural factors within the Kenyan water sector. Not only the current condition had to be analysed in this review but mainly the historical situation. Following the literature review, a profound stakeholder mapping was performed. This stakeholder mapping identified not only the stakeholder themselves but their networks and linkages. In this study expert interviews are used for triangulation and also to gain knowledge about informal and social aspects of the issue which cannot be found in the literature.

Since the issue of interest focuses on the non-payment of bills, this is considered a very sensitive issue wherefore gathering (quantitative) data in this research case was expected to be difficult. For this reason, partly structured expert interviews as an oral form of questioning are a central method in this research. Rated among qualitative research tools in partly structured interviews the questions are specified beforehand whereas no answer is predefined (Wernitz, 2018). Although they complicated the evaluation of the gathered data, open-ended questions were used to explore the field of interest which primarily lies within the so-called process knowledge. Process knowledge is based on experiences made by people which is one of the reasons why the interviews are only conducted with individuals and not with a group of people at the same time (Bogner, 2005).

Due to the geographical location of the study area, interviews were conducted in an online call. The interviews were conducted with individual experts belonging to different sectors in order to gain a wide insight on the matter. Interviewees therefore act as representatives for their institute. Institutions from different sectors are selected, covering not only the water service providers themselves but also the public institutions (both customers, and legislators), associations and non-governmental organizations. Besides water service providers preferred sectors for interview partners are NGOs, public institutions including public offices, educational and health institutions as well as security.

Following the recommendations for partly structured interviews, an orientation framework with the potential questions was generated, for deciding between theory generating questions and exploring questions.

Grouping the questions by different topics allowed asking the questions without the need of keeping the sequence in order to avoid the interruption of flow of speech during the interview. The interview questions have been adapted to each interview partner individually. Nonetheless the interview questions are structured by topic as well as main and follow-up questions (Bogner et al., 2014). The resulting thematic groups of questions in the conducted interviews are the following: Overview about the situation, causes and current handling, policy, financing, consequences.

Overall, the interviews were set to take 45-60 minutes, depending on the time availability of the interviewee and the sector the person belonged to.

For evaluation purposes the interviews were recorded. Following the recordings for each interview a transcript is to be generated to compare and analyse the data compiled. After transcription, the data was imported into the software maxQDA, which was used for clustering of the transcriptions into categories defined by the research team.

The categories were chosen as follows: corruption/political interference, operation/ current handling, politics, policies, finances, awareness, recommendations, causes and consequences (Figure 3).

The overall number of interviews conducted was nine and have thus covered all four desired sectors. The name of the institutions will be kept anonymous, but the answers of the respective sector of the interviewees will be abbreviated throughout the paper as followed: Non- governmental organisation - (INT NGO, 2021), Water Service Provider - (INT WSP, 2021), Legislating government entity - (INT GOV, 2021), public institution as customers - (INT PUB, 2021) and association - (INT ASSOC, 2021).

Subsequently, the categorised text passages were summarized and used as an entry point for further analysis by setting them into context with the already elaborated information from the literature review.

Background data

Information on the financial statement as well as reason of non-payment and information of institutions that do not pay have been taken from the background research of the “Government, pay your water bills!” campaign. Henceforth, also the study area was chosen because of the data provided by the campaign. The data consisted of 57 answers, with a majority of 34 water participating utilities in Kenya.

The following results have been used from the background research:

Reasons for non-payment

It was observed that the major cause is the lack of intention to pay (22%). In addition, it was stated by 15% that there are weak policies regarding non-payment (15%) and no consequences for customers that do not pay their water bills (12%). Also the fact that customers are public institutions is stated as a reason for their unwillingness to pay (14%).

Public institutions that do not pay

Police and security institutions are reported most often as being in debt according to 20% of survey respondents, followed by public offices which were mentioned by 18%. These institutions are followed by hospitals and educational institutions, which were reported by 15% each. Henceforth, the listed institutions were chosen to focus on in the PEA.

Collection ratios

Thirteen out of the sixteen water utilities for which data was given, showed low (less than 90%) collection ratios of 70% down to 1% for public/governmental customers, whereas the collection ratios for private customers of these thirteen water utilities were reported to be between 53% up to 98% for the last water and sanitation billing cycle. In all cases where data was available and collection ratios were low, variations between the utilities in the collection ratios among private and public/government customers were found.

Accumulated arrears

18 WSPs have provided information on accumulated arrears by governmental customers within the years 2015 to 2019. In total, the arrears in this 18 WSP accumulated to an amount of 8,488,863.72 USD in 2019, with an average of 471,603.54 USD. The highest arrears have been found with almost 2765 million USD and the lowest in an WSP with less than 600 USD arrears.

Results

Causes and consequences of non-payment were found out to exist and to lie both on the provider and consumer side. This Chapter provides an overview on the Kenyan water sector, aiming to identify structural and operational bottlenecks by bringing the perceptions of the interviewees in context with the literature review. Hereby the focus was on the geographical, economical and historical context as well as its structural, legal, financial and operational framework.

Geographical and Economical Context

Kenya is located on the east coast of Africa and has borders with Tanzania, Uganda, South Sudan, Ethiopia, and Somalia. The population of Kenya was at 47.5 million in 2019, placing rank 28 in the world densest populated areas' list with a projected population of 63.9 million by 2030 (Kenya National Bureau of Statistics, 2019; Ominde et al., n.d.). Within the total area of 569,140 km² of the country area, the distribution of the population is distributed into 27% living in urban and 73% in rural areas (The World Bank, 2020; Ingham et al., 2020).

Water is perceived as a limited and critical resource in Kenya. An estimated population of 16 million "rely on unimproved water sources, such as ponds, shallow wells and rivers" (water.org, 2021). Overall, Kenya is ranked on place 26 in the world list of water scarce countries. The limited freshwater resources that Kenya has, and which are especially important for rural areas, have faced a decline of about 2/3 since the 70's and account for 417 m³ per capita in 2017 (Royal Danish Embassy/Danida, 2010). In comparison, the freshwater availability in Germany per capita accounts for 1295 m³ in 2017 (The World Bank, 2021). In 2019, 59 % of urban and urbanising areas in Kenya are supplied with water, whereas the national average stands at 49% (WASREB, 2020).

Kenya is classified as a lower-middle-income country. With a GDP of \$ 101 billion Kenya has the third largest economy in Sub-Saharan Africa in 2020, following Nigeria and South Africa (Naidoo, 2020). The agricultural sector plays a crucial role in Kenya's economy with 26 % of the GDP directly linked to it. 40 % of Kenya's total population and 70 % of its rural population is employed in the sector (FAO, 2021). Furthermore, the mineral, chemical and textile sector are ranked as important sectors to the country's economy (Harvard, 2018).

Although the national vision for the water sector is to provide clean, safe and adequate water until 2030 the specific sector goals mainly include the extension of the network rather than the increase of sustainability of the existing system. Obstacles such as an estimated increase in water demand due to climate change and population growth challenges the government in fulfilling their targets. Furthermore, as raised by the Ministry of Environment, Water and Natural Resources Management Authority in 2013, the projected national budget of KSh 561.5 bn (~ 4.4 bn €) available for the water sector does not cover expected investments costs of KSh 1,287 bn (~ 9.9 bn €), summing up into a covering deficit of 56.4 % (Nippon Koei Co., 2013).

Historical and Legal Framework

With Kenya's long colonial background, the introduction of a solid legal framework within the water sector is rather new. The water sector as such, first needed to be established and brought challenges which required adjustments during the last decades. In this section, the procedure of the enactment of different frameworks is brought in context to Kenya's historical background, focusing on the diverse challenges the water sector faced and the approaches used to ensure a reliable access to water services.

Figure 1 presents selected Acts and policies that led to major changes within the water sector and serves as an overview.

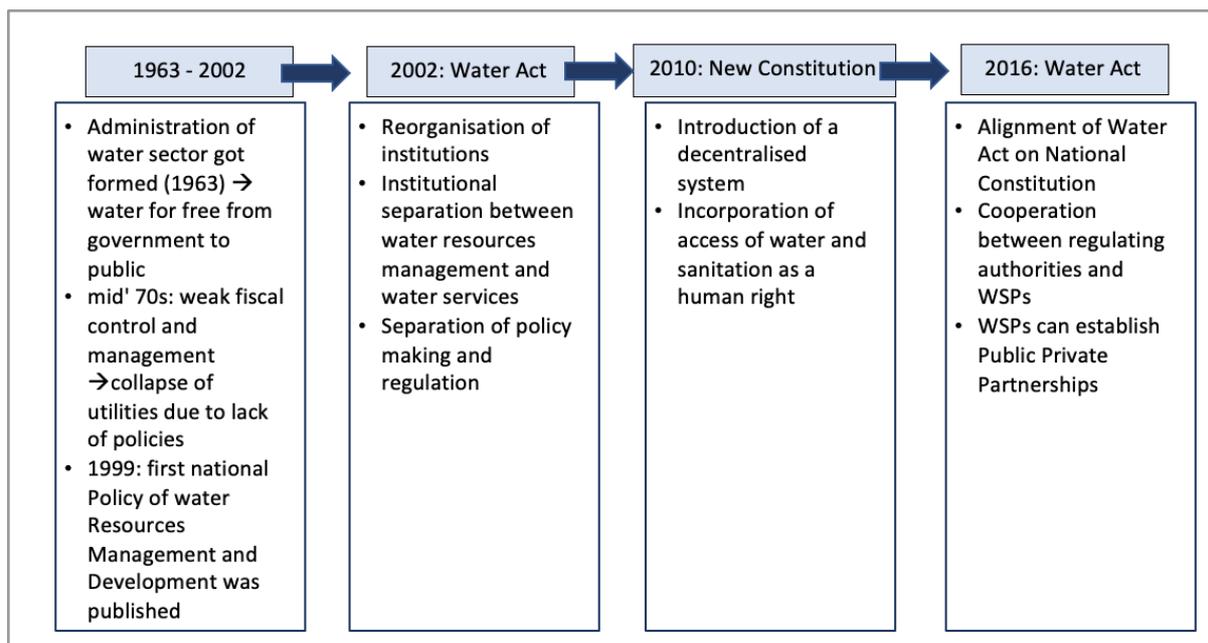


Figure 1: Main stepstones of the legal framework in the water sector in Kenya (own graphic)

Kenya gained independence from the British Empire in 1963 (Central Intelligence Agency, 2021). With independence, Jomo Kenyatta was sworn in as first president of the Republic of Kenya and led the country until his death in 1978. With him as president, an administration for the water sector was formed (Royal Danish Embassy/ Danida, 2010). In the mid 70s' water and sanitation was provided for free by the government to the public (Royal Danish Embassy/ Danida, 2010). Free water provision turned out to be unrealistic due to failed cost recovery and missing operating and maintenance systems. What followed were country wide self-help initiatives to strengthen community participation which ensured running water systems, among other facilities such as schools and roads. However, there was a lack in the operation and management of these facilities as well as a weak fiscal control. Therefore, the Ministry of Water Development (today Ministry of Water and Irrigation, short MWI) was established in 1974, followed by a National Water Master Plan targeting “water for all by 2000” (Royal Danish Embassy/ Danida, 2010).

The centralized system lacked capacity for good governance and accountability as well as opportunities for public participation (Castro et al., 2018). But the stagnation in reforms and the water and sanitation services remained unsatisfactory. Within the presidency of the subsequent president Daniel arap Moi, a new approach was chosen, trying to implement commercialization in the establishment of water sewerage companies formed by local authorities. Four pilot areas were selected for this purpose. After several project phases, four fully municipality owned utilities “were established under the Companies’ Act, Chapter 486” (Castro et al., 2018). This infrastructure rehabilitation involved a variety of the later nationwide intended programs regarding best practice in business management, pointing out the importance of non-interference from the county government. For instance, the new institutional system required autonomy of the utilities in line with “good Corporate Governance practices and the enhancement of productivity in the organizations” (Castro et al., 2018). But the commercialization attempt faced challenges due to the lack of national water policies prior to 1999 (Royal Danish Embassy/ Danida, 2010). Furthermore, the water sector faced a large financial gap in combination with a massive population growth, leading to the attraction of external donors which remained until today (Castro et al., 2018).

What followed was the **Water Act in 2002**, published by the Kenyan Government. The Water Act led to major changes within the water sector through reforming the Kenyan water policy by decentralizing and

unbundling institutional arrangements (Water Act, 2002). A main stepstone was the institutional separation between water resources management and water services (Rampa, 2011; see Figure 1). This distinction results in a variety of involved stakeholders with different interests and governance approaches. The reform was driven by aiming to increase human right standards and the overall performance of the services in water supply and sanitation in Kenya and required capacity building in all fields as well as the clarification of lacking or overlapping responsibilities (Leclert et al., 2016, Kanda et al., 2013). To improve the sectors' coordination and accountability, an improvement of regulation and enforcement as well as a clear separation of policy and regulation ought to be implemented (Leclert et al., 2016). The reform addressed the absence of financial self-sufficiency and transparency in financial management as well as high expenses, low revenue, insufficient funding and capital investments, e.g. through designating revenues in the water sector towards water service improvement (Pahl-Wostl, 2007; Wambua, 2004). Another main objective of the Water Act of 2002 was the introduction of eight Water Service Boards (today Water Works Development Agencies) responsible for the endurance of cross county development, maintenance and management of public water works (INT GOV, 2021). In order to achieve these objectives, new institutions were established at national, regional and local level (see Figure 2).

However, with the introduction of many institutional bodies, new challenges arose with the reform of 2002. Over-institutionalization resulted in an overload of mandates within institutions and the engagement of too many stakeholders which slowed down the process and achievement of water service targets. Additional challenges were faced because of a lack of accountability especially by entities in charge of decision-making, chaotic and uncertain implementation of the reform, weak regulatory premises and the prioritization of large urban investments over rural interests (Rampa, 2011).

One of the main changes in the Water Sector was made in 2010, when the new **Constitution of Kenya** (CoK) introduced a nation-wide decentralised system with the establishment of 47 counties. Thus, the adaptation of the operation towards an establishment of municipal water and sanitation companies by local authorities took place. Those are intended to run on strictly commercial principles under "agency contracts" from the parent local authority. Under the framework of commercialization, local authorities emphasize the use of earnings towards the improvement of service provision (Wambua, 2004). Furthermore the new Constitution encourages a socially responsible commercialization (cost-recovery and ring-fencing) of water services. For the first time the right to clean and safe water in adequate quantities is constitutionally protected, especially for underserved and marginalised groups (K'Akumu, 2006; Kenya Law, 2013).

With the changes in governance, institutional power distributions and management responsibilities, the existing water act needed to be adjusted and aligned to the new institutional framework. Therefore, after a long process to ensure a conscious, data-driven progress (INT GOV, 2021), an adjusted Water Act was formulated and implemented in 2016 under the presidency of Uhuru Kenyatta. The **Water Act of 2016** is in force until today (Water Act, 2016). One of the major obstacles for the water sector was the devolution, which required a county government to be more responsive to the needs of the population, particularly with regard to rural areas (e.g. rural water, health and education, which was not facilitated under the Water Act of 2002) (INT NGO, 2021).

As a result of the new CoK, the assigned responsibility of water service provision shifted from the national to the democratically elected county governments. With this shift, new regulation and management bodies needed to be introduced to ensure that WSPs fulfil requirements set by national standards (Rampa, 2011).

One example is the new established sector regulator (WASREB), which promotes closer cooperation between authorities and the Water Service Providers and the financial viability of providers by issuing licences to them (WASREB, 2020).

Implementing the constitutions aspiration of socially responsible commercialization, the Water Act 2016 states that “all funds collected for water services by the licensed WSPs holding county or national public assets on behalf of the public through water services bills and other sources, shall be used entirely for the purpose of covering costs for the provision of water services and asset development according to regulations made by the Regulatory Board” (Water Act, 2016). Therefore, the area of water service provision prescribed by the licence shall not be less than required for a commercially viable water service. In this spirit, WSPs can also establish public private partnerships (Water Act, 2016).

However, the conducted interviews reveal that the new Water Act shows gaps when it comes to the implementation of the policies. The result being slow progress of changes, especially towards the improvement of water service delivery because “the introduction of policies often loses its momentum when the process is slowed down because they sit on someone's desk for a signature and ceremonial launching” (INT NGO, 2021). Furthermore, some participants described confusion with the reform in the water sector, which exacerbated the already lacking motivation of some institutions to perform better (INT GOV & WSP, 2021). The transition from formerly state-employed personnel with guaranteed salaries to a business-like operation of the water utilities required a change in mindset that took some time. Nowadays “most utilities are aware that human resource capacity translates into efficiency of operation and revenue collection” (INT GOV, 2021). The new Water Act was also described as a perceived set back to the previous system in terms of collection efficiency. The county governments, as the authority owning and responsible for the WSPs, was of the opinion that it did not have to pay for the consumed water.

“It was difficult to approach a government institution to request payments. There was a big war concerning this, which was taking us back to the 90s.”

(INT GOV, 2021)

Many WSPs experienced threats issued by governmental consumers, who didn't want to pay for their consumed water (Castro et al., 2018). Some county governments also expected the WSPs revenues to be transferred to the county accounts to decide over its purpose. The ring-fencing of WSPs revenues was not wanted and disrespected by many county governments. According to an interviewee, the internalization process of the new mindset and management concept took time (INT GOV, 2021). But today, many of the county governments understand that they have to work at arms lengths with the providers (INT GOV, 2021).

In the scope of the interviews, the overall expressed perception is that there are sufficient and good policies in the water sector of Kenya at the moment. The perceived core issues related to policies with regard to governmental non-payment of water bills are the implementation and enforcement of the present policies. An interviewee points out that in order to implement policies in the counties, there is a need for committed, qualified and competent personnel within the field of water (INT ASSOC, 2021).

“Each five years there is an election and the WSPs have to restart afresh. Still, the county governors have political influence on the management of WSPs in their jurisdiction.

This also counts for the policies the WSPs have in place - commitment and implementation become a problem”

(INT ASSOC, 2021)

Interviewees have pointed out that the challenge is the awareness and dissemination of the existing policies, which is why Civil Society Organisations have tried to ensure sessions, where dissemination of policies take place (INT NGO & PUB, 2021).

An interviewed NGO emphasized that pro-poor policies are required to provide a solution to the financially disadvantaged population. Clear policy enforcing free alternative water supply in case of unstable connection in order to enable health facilities to fulfil their mandate are required (INT PUB, 2021). One mentioned example of concession is the amnesty granted by a WSP in Mombasa to non-paying customers in financially difficult situations. The WSP freed them from their bills with the request to pay for from now on (INT NGO, 2021).

Structural Framework

The involvement of all key stakeholders as well as an efficient, accountable, and transparent management of water is necessary to ensure a reliable access to water services (Laban, 2007).

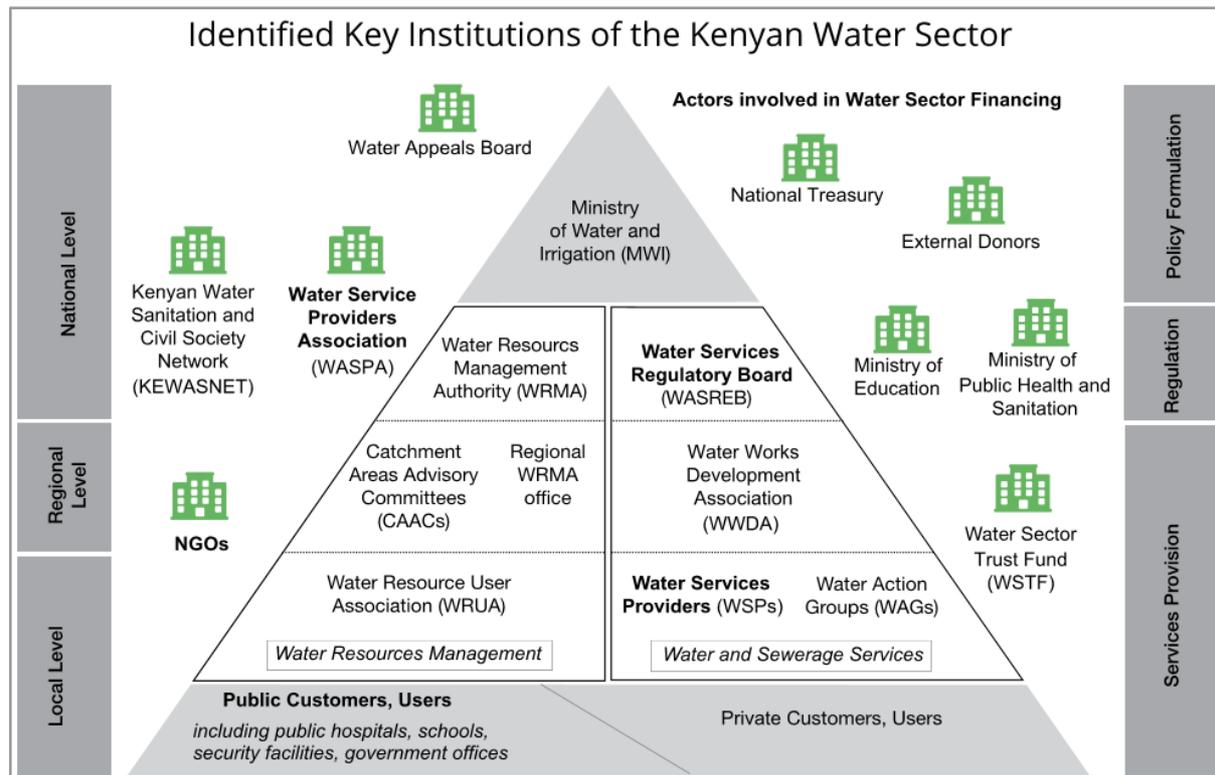


Figure 2: Identified Key Institutions of the Kenyan Water Sector regarding the issue of non-payment of public institutions (adapted from IBRD/ The World Bank, 2015)

This research centres on the institutions involved in sector financing, capacity building and water and sewerage services. Figure 2 shows the identified key institutions in the sector, the stakeholders who participated in the conducted interviews are shown in bold.

The institutions of the Kenyan water sector can be distinguished regarding their focus on either water and sewerage services (Figure 2, right part of the pyramid) or water resources management (left part of the pyramid) based on the Water Act 2002 and 2016.

The **Ministry of Water and Irrigation (MWI)** holds the responsibility of the development of water policy and legislation as well as strategy formulation, sector coordination and guidance. The MWI has a key role in financing, monitoring and evaluating the sector (IBRD/ The World Bank, 2015). For instance, during the current pandemic, the MWI issued the statement that “WSPs should not disconnect its customers even in case of non-paid bills” (INT NGO, 2021).

The **Water Appeals Board** functions as a mediator between institutions in the water sector in conflicts and disputes (IBRD/ The World Bank, 2015). The **Water Service Regulatory Board (WASREB)** is the

regulating institution in the Kenyan water sector. It oversees the implementation of national policies and strategies aiming to ensure best practice in the “affordable, efficient, effective and equitable water service provision in compliance with the Water Act 2016” (Water Act, 2016). As part of its regulatory role, WASREB monitors and evaluates the performance of all the WSPs and Water Works Development Associations (WWDA) against certain parameters and publishes the results in the Water Sector Impact Report (IBRD/ The World Bank, 2015).

Under the Water Act of 2002, eight **Water Works Development Agencies** (WWDA, previously called Water Services Boards) were established. Together with the county governments, WWDA are the principals of WSP regarding the provision of water and sanitation services. WWDA operate in a cross-county jurisdiction and are responsible for the development of public water and sanitation service assets, planning and implementation (INT NGO, 2021). It is the responsible institution for contracting WSPs.

To monitor and evaluate the sector's performance WASREB requests several performance indicators from the WWDA and WSPs and defines overall benchmarks and utility specific targets. These targets are established in order to improve the individual WSPs and the water sector's overall performance. WASREB publicly publishes the WSPs' performance in its impact reports, providing an accountability tool to the public and potential investors (WASREB, 2020). Since the Water Act 2016, WASREB directly issues operation licences to WSPs and WWDA. This allows the regulator to apply and enforce operational licence requirements. WWDA in turn engage and contract WSPs to operate the systems in demarcated service areas. Another critical regulation interface between WASREB and the service provider is given with the issuance of the WSPs water tariffs following the tariff guideline of the regulator. The applied strategy by WASREB in order to ensure the WSPs overall compliance are education (foster learning, self-regulation, inducement), prevention (warning, surveillance) and enforcement (coercion, deterrence) as a last resort. Depending on the WSPs level of compliance, these mechanisms are implemented according to WASREB's so-called pyramid of sanctions (WASREB, 2010).

The Board of Directors is an important instrument through which a County Government can provide vision and guidance but also politically interfere with a WSP, as at least one Board Member is provided by the County Government. The Board of Directors supervises and supports the WSPs management in its decisions in accordance with Corporate Governance Guidelines (CGG) and requirements from relevant institutions like the WWDA and WASREB. The opportunity of political interference is high, as WSPs are still 100 % owned by the county government and thus decisions can be influenced by personal interests.

Therefore, the regulator monitors the corporate governance and board composition of WSPs. In 2009, the CGG were introduced in order to “formalize the leadership and management structure of WSPs” (WASREB, 2018). Hereby the focus emphasizes the importance of guaranteeing economical, efficient and sustainable provision of water and sanitation services, by improving the management of WSPs “clarifying power, autonomy and oversight” (WASREB, 2020). The CGG determine objectives and functions of the WSPs' shareholders, board of directors, management and staff. WASREB has pursued remedial actions including through the court system in the case of external interference with corporate governance (IBRD/ The World Bank, 2015). As the election of the County government is held every 5 years, WSPs that do not have an accountable system in place to prevent interference often face divergent interests of leadership and impunity (INT GOV, 2021).

According to the interviewee's corruption remains an issue at many levels (INT NGO & GOV, 2021) including public institutions (INT NGO & WSP, 2021) and within the issue of non-payment of water bills (INT NGO, 2021). As prevention measures, the CoK entrenches strategies for integrity and anti-corruption with its Ethics and Anti-Corruption Commission on national level. Also WASREB aims to enforce anti-corruption with its zero tolerance policy (INT GOV, 2021), which is to be signed and

implemented by all public stakeholders such as the WSPs and WWDA. The policy focuses on the sensitization and capacity building of staff on all levels on matters of ethics and integrity (INT WSP, 2021). Still, the implementation of anti-corruption regulation lies within the individual utilities and their managing boards (INT WSP, 2021).

WASREB implemented a platform called *majivoice*, which is an “innovative accountability mechanism” to reduce corruption and improve public services by enabling customers to complain about their WSP. The platform aims to provide customers with information on their rights in order to reduce customer manipulation (INT GOV, 2021; World Bank, 2015). In 2009 WASREB established the project of **Water Action Groups**, which are volunteer organisations based in communities that act as consumer representatives to facilitate communication between consumers and the water sectors institutions (Owoko, 2017).

Within the water sector financing, the **Water Sector Trust Fund** (WSTF) of Kenya plays an important role, as it is an initiative, implemented to support WSPs in accessing commercial financing (Advani, 2016). The state corporation invests in pro-poor water and sanitation infrastructure and is running a results-based financing program that provides grants to WSPs that access commercial loans for investment. “The program is supported by the World Bank, through the Kenya Output-Based Aid fund for low-income areas, and by KfW, through the Aid on Delivery program” (Advani, 2016).

When it comes to the improvement of governance and capacity building in the water sector, Civil Society Organizations have been identified as important Actors. A network called **KEWASNET** (Kenya Water and Sanitation Civil Society Network) has the objective to promote good governance in the water, sanitation and hygiene sector addressing aspects like integrity, accountability, innovation and collaboration through capacity building. The offered training ranges from integrity management, county coordination and development to the issue of budget tracking (KEWASNET, 2020).

Furthermore, the **Water Services Providers Association** (WASPA) serves as the “premier umbrella body of all WSPs” (WASPA, 2020) of Kenya. Its objective is to provide and facilitate an enabling environment for its members. In September 2020, 70 out of the 88 WSPs in Kenya were part of the Association (INT ASSOC, 2021). One instrument is the development of an Information Management System (WASPA, 2020). An example of capacity building is the publication of technical guidelines for water meter management (WASPA, 2015).

Non-governmental organisations (NGOs) might not play a major role but have been of large importance for this research in terms of knowledge generation. Furthermore, NGOs contribute to solving the issue of governmental non-payment through the dissemination of awareness.

The actors involved in the water sector financing process (National Treasury, Ministry of Education, Ministry of Health and external donors) will be further discussed in the following.

Water Sector Financing

This section provides an insight to the Kenyan water sectors financial framework and the financial flows among the respective actors. As public institutions contribute to the financial flows towards WSPs, they are considered as part of the analysis. First, the financial situation and process of budget allocation to the public institutions that are customers of WSPs is described. Hereby the focus is on the education and health sector, due to the information gained in the conducted interviews. This is followed by the description of the WSPs financial situation.

Budget Allocation towards Public Institutions

Budget allocation and availability for non-paying public institutions but also the WSPs have been identified as key contributors to the issue of governmental non-payment of water bills. The importance of this aspect was strongly emphasized in the conducted interviews.

Public institutions, including WSPs, receive annual funding from the central GoK, which derive their available budget mainly from tax revenues. In Kenya, the respective budget allocation and application process within the different institutions differs because many institutions are involved in the process. Once a year, a proportion of the national budget is allocated from the National Treasury towards the different sectors, including the water and sanitation, the educational and health sector (IBRD/The World Bank, 2015). A financial year is from 1 July to 30 June of the following year. In the financial year of 19/20, overall public expenditure of the Kenyan National treasury was 2.8 trillion Ksh (~ 21.7 bn €) which is composed of a total revenue of 2.1 trillion Ksh (~ 16.4 bn €) and 38.8 bn Ksh (~ 301 million €) through grants. This resulted in a deficit of 607.8 bn Ksh (~ 4.7 bn €), which implies that the annually allocated money cannot fully cover the country's expenditures. This negatively impacts the budget allocation among the different sectors and is one of the main reasons why the water sector depends on external donor support (The National Treasury and Planning, 2019; IBRD/ The World Bank, 2015). Generally, interviewees from public institutions and WSPs state that the necessary budgets are often delayed or not covering their costs.

In principle, every public institution, including the WSPs, is obliged to submit an annual budget plan. If the set budgets are too tight, the institutions can apply to Parliament for supplementary budgets (INT NGO, 2021). Sometimes public institutions such as schools also do not have the capacity to indicate the budget for water, which ultimately leads to insufficient budgets to pay the bills. "This remains an issue of awareness and has to be overcome" (INT NGO, 2021).

To receive a budget approval or the approved budget itself takes a lot of time. Public institutions rely on their parent ministries which again rely on payments from the national treasury. "In this financial year, it took the Senate 4 months to reallocate the revenues to the counties" (INT NGO, 2021). In addition to the usual budget delay, budgets determined by the national government are sometimes reduced for "whatever reason" (INT NGO, 2021). Often this results in non-payment without the intention of the public institution (INT NGO, 2021). With the money deficit for the respective financial year, the institutions are not able to pay its bills and are forced to prioritize other payments (INT ASSOC, 2021).

In 2019, the National Treasury invested a large proportion of the total national budget of 494.8 bn Ksh (~ 3.9 bn €) in **education** (The National Treasury and Planning, 2019). Out of that budget, the ministry of education again allocated 21.7 % into the basic education program, incorporating 13.4 bn Ksh (~ 103.8 million €) for free primary education and 59.4 bn Ksh (~460.2 million €) for free day secondary education. However, "most of the public institutions are in debt" (INT WSP, 2021). Public schools are a primary example for the mismanagement in cash flows and delay of budgets found within government institutions in Kenya. "Public schools are often forced to prioritize other areas than water bills" (INT NGO, 2021) and suffer from the consequences of water supply disconnection. In 2019, the ministry of education dispensed a free education fund for public schools which accounted for 1420 Ksh (11.03 €) per year per child in primary education (Ngware, 2019). "These funds minus expenses for water, electricity etc. sum up to only 60 Ksh per child" (0.47 €) (INT NGO, 2021). The budget is too little to cover the running costs of schools. In other cases, the funds, which are released from the exchequer to the accounts from the institutions, is often delayed (INT GOV & ASSOC, 2021). An interviewed NGO pointed out that schools suffer from further cash flow issues, because school fees cannot be afforded by many students (INT NGO, 2021).

The state treasury also does not budget enough for **hospitals**, which is why hospitals in some districts have to close because they cannot pay their bills (INT NGO, 2021). The total budget allocated towards the health sector in the financial year of 18/ 19 was about 121 bn Ksh (~937.5 million €), which account for 27.2 % of the annual national budget available (Ministry of Health, n.d.).

Hospitals are obliged to determine their annual budget. An interviewee stated that sometimes, the revenue and allocated funds are not sufficient to cover all expenses, forcing utilities to prioritise already low salaries over water bills (INT NGO, 2021).

However, water supply is crucial for a hospital in order to serve its objectives. An interviewed financial administrator of a public hospital stated that “when hospitals budget for water, they must use this budget for paying water. Non-payment can thus only arise if an institution does not budget for water” (INT PUB, 2021). Public hospitals can always make proposals to receive funds from external donors, but not directly, which is why NGOs often support them in this procedure. The overall procedure is complicated, the bureaucracy, especially to find a way through all the channels the application has to go through are challenging (INT PUB, 2021).

The interviewed financial administrator stated that “ideally public hospitals should be getting water freely.” He also emphasized on the demand for clear policy, enforcing free alternative water supply in case of unstable connection in order to enable health facilities to fulfil their mandate (INT PUB, 2021). Alternative water supplied by individual vendors is more costly than water provided by the WSPs.

All in all, interviewees confirmed that besides the structural issues within the water sector, also **corruption and governance** play a role in the allocation of budgets (INT NGO, 2021). The issue of delayed or mismanaged budget allocations in combination with corruption have been identified as reasons for non-payment from public institutions. On the one hand, due to delays in the cash flow, WSPs are not able to deliver appropriate water supply to their customers, which in turn fosters their prioritization to pay for other bills than water with the little budget that they receive. On the other hand, non-paid bills as a result of too little funds to public institutions such as schools and hospitals, lead to disconnection for the entities and thus, affect their service provision. In hospitals they cannot serve their patients without access to water (INT GOV & PUB, 2021).

In addition, one of the major problems for public institutions and WSPs was identified to be based within the historical context of restructuring the water sector. An interviewee noted that before the enactment of the water reform in 2002, government institutions, including municipalities, mayors and county offices owed a huge amount to the WSPs. In Nakuru County, for example, the government was already heavily in debt before the devolution. In the reconstitution of the WSPs split that debt load into shares.

“With voodoo economics they put that on paper, which remains a problem until today”

(INT NGO, 2021)

Financial framework of WSPs

In the financial year 2020/ 21, the national government has allocated 82.7 bn Ksh (~ 642 million €) to water and sanitation services (Okoth, 2020). However, only a small proportion of that money is allocated directly towards WSPs because other sectors are prioritized (INT ASSOC, 2021). A reason for this prioritization is the fact that WSPs in Kenya are expected to meet their operation and maintenance (O&M) costs from internally generated resources from tariffs (WASREB, 2020). Some WSPs can run autonomously, whereas most WSPs still demand financial support from donors or the government especially for infrastructure projects (INT GOV, 2021).

Licence fees and tariffs are to be applied in meeting costs incurred in the performance of the WSPs and WASREBs functions (Water Act, 2016). Each individual WSP submits a tariff application for WASREB

to consider and evaluate. This tariff aims to be affordable and fair to the consumer and cost-recovery for operation and maintenance expenses in order to run a utility commercially in a sustainable, business-like way (INT GOV, 2021). The respective legal framework is the tariff reform of 2009 that was led by WASREB, simultaneous to the introduction of the aspect of Corporate Governance (WASREB, 2020). Overall, there are three types of tariffs covering different types of WSPs, considering factors such as the utilities size and location (rural or urban). Tariff type I is assigned to utilities that are not able to fully cover their O&M costs in order to achieve 100 % recovery of costs. Tariff type III is assigned to utilities that achieve full O&M cost-recovery and are debt-free or debt repayment is ongoing (IBRD/ The World Bank, 2015).

Tariffs are determined based on the WSPs performance. The tariff application includes technical and financial **Key Performance Indicators** (KPIs) (IBRD/ The World Bank, 2015).

If a WSP can provide a stable and good performance including high-quality data to WASREB, the so-called aspect of relaxation comes in (INT GOV, 2021). WASREB rewards this good performance with a stable tariff for several years considering inflation and further unexpected events. When a utility is doing well, the tariffs approved will be able to cover the utilities' O&M expenses plus the allowance to use the internally generated money, from the customers, to do minor investments.

Often WASREB grants the utilities a tariff that is far above what they require to cover their O&M which is used on agreed projects with respect to water supply investments (IBRD/The World Bank, 2015). However, there is often still not enough money for new investment projects (INT WSP, 2021), which is why most of the WSPs rely on supplementary funding from local, national and external sources (INT NGO & GOV, 2021).

The interviewed WSP stated that for a majority of the WSPs, the internally generated income is not sufficient for a sustainable operation. "Non-payment of water bills is one of the reasons for this financial situation" (INT WSP, 2021) with the departments of the GoK and public institutions identified as the largest debtors (MWI, 2007). With the reforms of 2002, the revenue generated from tariffs has increased. Nevertheless, in the majority of cases, the WSPs financial resources are especially scarce when it comes to further investments (INT WSP, 2021; IBRD/The World Bank, 2015). Therefore, besides the consumer contribution, WSPs often rely on operating subsidies and receive financial support from both, national and their respective county government, the WSTF and external donor support (INT WSP, 2021; WASREB, 2020).

Besides the regulated tariff system, the corporate governance structure entails the responsibility of county governments to manage, approve and adjust budgets. WSPs submit a budget plan annually, which must be approved by the county government. WSPs often have a budget deficit and cannot cover its O&M costs through tariffs. In this case, the utility can request to be bailed out by the county government but "some county governments do not understand why they should bail WSPs out when they are supposed to generate revenue" (INT NGO, 2021). The money to pay them out is calculated as part of the County Development Plan, in which the county government is required to list all budgeting and expenditure as it receives part of its money from the national treasury (INT NGO, 2021; IBRD/The World Bank, 2015). Nevertheless, the procedure for approving supplementary budgets remains difficult and the cashflow and **budget dependence** of WSPs on the national and county government affects its operations. The county government receives budgets from the national government, which are often delayed. Interviewees mentioned that the more the budget allocation from the central government is delayed, the higher the probability that the county governments will not even release funds to some of these WSPs (INT NGO & GOV, 2021). The WSTF will pay a subsidy to WSPs that successfully implement projects with pre-agreed results. The subsidy is a non-repayable grant to reimburse the WSPs for part of the capital investment cost. The WSTF itself is supported by international donors (INT NGO, 2021).

As Kenya has not done well with targeting and investing money in the past, therefore investment plans for **external funding support** are still needed (INT GOV, 2021). Sustainable water supply has been able to increase through donor support but is still depending on international donors but decreasing each year (INT NGO & GOV, 2021). Recently there is less support from donors also due to the country's status as a middle-income country, corruption and increasing strike culture in Kenya (INT NGO, 2021). In case WSPs need financial or technical support from public and private donors and development partners, WASPA does not give grants directly to WSPs but links them to donors and supports WSPs to request funds for example from the ministry to buy chemicals (INT ASSOC, 2021).

WASREBs performance ranking of the WSPs “has also been used by different partners to extend their support” (INT GOV, 2021). The regulator assists development partners such as the World Bank to identify “which utilities have a good performance, and which would actually benefit from financial support from the partners” (INT GOV, 2021). Sector investments in infrastructure and operation improvement shall be linked to performance of WWDA and WSPs including business planning obligations and priority setting (MWI, 2007). The National Water Service Strategy points out the importance of development partners funds, which are to be “channelled through the MWI, WSTF and WWDA” (MWI, 2007). These institutions shall emphasize, document and disseminate best practices and the best investment opportunities to specifically reach the rural and urban poor (MWI, 2007).

The financial gap, resulting from delayed or insufficient funds, in combination with non-payment from government institutions, has the consequence that many WSPs are unable to deliver adequate water supply to their customers or to expand their network. Delayed payments cause challenges in providing continuous services to customers and the payment of governmental arrears would improve the liquidity to invest in further network expansion and reliable water provision to the paying customers (INT WSP, 2021).

Operation of water service providers and handling of non-payment

The potentials and bottlenecks of the WSPs situation in the issue of non-payment is strongly dependent on its management and operational framework, i.e. metering, billing and collection efficiency. Non-payment of water bills is thus reflected in various performance indicators, uncovering several causes for the non-achievement of a cost-recovery operation. Among those, the customers' awareness about the cost of water delivery and sanitation supply is crucial.

*“The WSP has the responsibility to sensitize the customer in their payment behaviour
- some people think water is free”*

(INT WSP, 2021)

In order to sustainably operate a WSP, the achievement of a high revenue collection efficiency is required. It is therefore important to transparently explain the cost of maintenance and operation. At the same time appropriate policies, billing and metering systems are required.

The key performance indicators measure the efficiency of the billing and metering systems, among others. One indicator to measure the performance of the billing system is the revenue collection efficiency, which is the ratio of customers billed and amounts collected. Unfortunately, most utilities approach their calculation of collection efficiency by comparing collections and billings which often do not date for the same period of time, delayed paybacks of arrears being one of the causes. WASREB therefore introduced the licence requirement demanding a clear separation of collections for the current bill and the collections of arrears. However, this has not been practiced over the past decade and hence does not allow an in-depth interpretation of the indicator (INT GOV, 2021). Nevertheless, the revenue collection efficiency gives an overview on the attempt of WSPs to issue bills and can give information

about the payment behaviour of customers. The acceptable benchmark for **revenue collection efficiency** has been set to 85 % and has been achieved by all utilities in Kenya with a national average of 92.2 % (WASREB, 2020). In order to increase the collection efficiency and its calculation, effective dissemination of water bills, metering the customers' water consumption and a constant and regular payment by their customers is essential.

Currently there are no explicit policies regarding the collection procedure of WSPs (INT GOV, 2021). The responsibility to implement meter and billing management strategies and employ designated management staff lies with each individual utility. Therefore, collection policies, its implementation and efficiencies are very individual for the utilities. As mentioned earlier, implementation of existing collection policies, such as disconnection, become challenging for some WSPs (INT GOV, 2021).

“We would not be having a challenge with collection efficiencies, if the implementation of disconnection policies was enforced”

(INT GOV, 2021)

Furthermore, the technical guideline for water meter management published by WASPA in 2015 emphasizes on the need to address **water metering** as a source of commercial losses. According to WASREBs Impact Report for the financial year of 2018 / 2019 the national average **non-revenue water** is at almost 43 % (WASREB, 2020). A high level of non-revenue water can thus often be an indicator of insufficient or mismanaged meter systems and further contributes to the operational and financial inefficiency (WASREB, 2020). According to WASREBs Impact report, on a national level, the average metering efficiency of WSPs is 94%, with a decreasing trend to the year prior (WASREB, 2020).

WSPs often explore and implement a variety of metering technologies regarding its payment method either prepaid or post-paid - prescribed according to the Kenyan Bureau of Standards. Mechanical meters must be read on site, whereas smart meters can conveniently be read and disconnected remotely (INT WSP, 2021). By law, the service provider has the right to access a meter for the purpose of reading or disconnection. In 2015, most WSPs were using mechanical flow meters (rotating-piston, velocity) (WASPA, 2015). According to an interviewed WSP, the software aspect of smart meters becomes a challenge, which is why working with mechanical meters has proven to be easier for them despite the smart meter's advantages (INT WSP, 2021). An interviewee nevertheless emphasizes that smart meters “will cut a lot of problems and will make life easier for users and providers” (INT ASSOC, 2021). In the technical guideline for water meter management, WASPA points out the demand for the establishment of a meter registry in order to “assess the correlation of meter performance, lifespan and other attributes” (WASPA, 2015).

Inaccurate billing systems within the WSPs often lead to incorrectly issued water bills and are prone to non-payment. A water bill is required to be issued at least once every month in compliance with WASREB requirements, but some customers do receive wrong bills or no bills at all (INT GOV, 2021). Customers might not pay their water bill, when they feel it is not fair.

“Over 90 % of the complaints on majivoice are related to billing.”

(INT GOV, 2021)

Cashless **electronic billing systems** have shown a positive effect for the WSPs revenues, decreasing the embezzlement of collected money within the utility as well as the interface between customer and utility worker (INT NGO, 2021).

WSP employees sometimes cannot access a metering device for reading or maintenance without problems. Customers might be reluctant to grant a utility employee access, for instance due to an

outright unwillingness to pay and the fear of subsequent disconnection. Interviewees have described behaviour of gate-locked premises, guard dogs, threat or armed defence.

“Every time the WSP went there the local police station would send somebody to come up with a gun and say I'll shoot you! Don't come and disconnect here!”

(INT ASSOC, 2021)

More than 60 % of the customers will at least try to avoid paying completely (INT ASSOC, 2021). Especially police stations or military institutions require an adaptation of metering technology without physical interaction. For instance, placing a regular meter or smart meter in a distance to a critical institution has proven to have an effect on the customers compliance (INT WSP & GOV, 2021).

To circumvent these obstacles, the employment of customer relationship management is crucial to WSPs. The interviewed WSP states: “We do not want to be on warfront with them. We appreciate the work public security institutions do - so we try to work things out. We want to ensure that at least we get paid, and we continue our service” (INT WSP, 2021).

Furthermore, WSPs are not yet exploiting the provisions for **interest rates** which could be applied to arrears after 30 days of non-payment. The interviewee stated that WASREB will further exploit the provisions to push customers to pay for their bills (INT GOV, 2021).

In case the quality of water service provision (water quality or connection stability) is not good, customers might not perceive a big impact in case of a disconnection, nor the need to pay. This might also lead to institutions prioritizing other services like electricity (INT GOV, 2021).

“The willingness of the government institutions to pay also depends on the kind of service that they're getting from the service provider.”

(INT GOV, 2021)

Besides operational issues from the WSPs side, lacking consequences of non-payment for the customer is one mentioned cause of non-payment. The water sector regulating authority (WASREB) and WSP mention disconnection policy as an example, which fails to be implemented at times. It is the individual WSPs responsibility to implement and enforce policy regarding non-payment in order to "collect what is deemed for them" (INT WSP, 2021).

*“The government says: even if we don't pay - you do nothing!
Government utilities do not see the urgency in paying utilities”*

(INT GOV, 2021)

As a last instance to enforce payment and to generate their revenues, WSPs have the option to disconnect non-paying customers. WSPs aim to encourage a customer to pay without **disconnection**, because even disconnection does not guarantee payment and implies additional costs for the WSPs. Some WSPs implement a policy that allows the utility to disconnect the water service after 7 days of non-payment. Once an arrangement is reached with the customer, the connection will be restored. Reconnection charges around 500 Ksh (~ 4 €) are applied, which - according to the interviewed WSP “might not even cover the disconnections operational costs” (INT WSP, 2021), which is why “over 70% of the WSP never disconnect. Their active approach is negotiating with the clients. But if you find the situation where the client is disconnected, these are hardcore clients. That's when you are only left with one solution - and that's to disconnect for them to realize that they are supposed to pay” (INT WSP, 2021).

However, customers get categorized and treated differently. Hospitals and public schools get more time before disconnection (INT WSP, 2021). In other cases, some WSPs do not give a non-paying customer a quick and intense enough reminder or incentives to pay arrears (INT NGO, 2021).

Consistent action regarding disconnection has strengthened the accountability to other service sectors, resulting in bills other than water being **prioritized**, depending on the individual institution's management (INT PUB, 2021). "Electricity companies are categorical - they will shut you down on any occasion" (INT NGO, 2021). Furthermore, the penalty for stealing electricity is around 25 times higher than stealing water (INT NGO, 2021).

Those who can't pay at a time are asked to defer payment or to come up with a payment plan or payment rate arrangement (INT NGO & GOV, 2021). The more cooperative the customer, the higher the WSPs effort to ensure service provision with payment plan (INT WSP, 2021). Micro solutions are required to resolve the customer's individual situation, which is time and labour intensive for the WSP (INT NGO, 2021). In cases where the arrears of private or public customers have summed up to be huge and "impossible" to pay for, the intervention from the top is required (INT NGO, 2021).

"The WSPs understand the issues with the exchequer. We formulate conditions and payment plans. When we see that someday they pay - we are able to continue normal operations."

(INT WSP, 2021)

Nevertheless, **Political interference** within the WSPs operation can pose a barrier to the utility's efficiency. "The WSP tries to do the right thing and disconnects due to non-payment. Then they get a phone call from the top telling them to reconnect" (INT NGO, 2021). An interviewed NGO stated that WSP managing directors are afraid of consequences like losing their job in case they execute a disconnection (INT NGO, 2021). Even if a WSP has put comprehensive metering and billing systems in place, corruption and political interference with and within WSPs exist (INT NGO & WSP, 2021). Employees often tend to act in a corrupt manner because they are underpaid and want to compensate that through deals with customers.

"Employees save customers from disconnection for getting the money directly in cash. The problem is that the WSP is losing money with it"

(INT ASSOC, 2021)

Identified causes and consequences

In the scope of this research a variety of causes and consequences in the complex issue of governmental non-payment of water bills were identified. Some of these have been found to exist national wide whereas others are based on individual circumstances.

Causes for non-payment of water bills according to the interviewees have been identified to mainly arise because of shortcomings in the money distribution/flow within the whole water sector but especially the delay of funds towards public institutions, poor governance within the water sector, the current handling of non-payment by policies and the metering or billing procedure itself. Among the consequences, poor performance of water utilities alongside poor service quality for public customers and the (illegal) usage of alternative water resources have been identified.

Accordingly, the main causes identified from the interviewee statements support the main reasons (weak policies and no action was taken against customers in arrears) as it was indicated in the background data from the survey. Besides the causes indicated in Figure 3, non-payment is often an issue of orientation, attitudes and prioritization (INT NGO, 2021), which can result in unwillingness to pay.

Causes

Attitudes and perception

The interviewees agree that people are aware that they have to pay for water, that water delivery has a cost and thus cannot be for free and that in case of non-payment, they might be disconnected from the water supply (INT NGO, GOV, WSP & ASSOC, 2021). Thus, a lack of awareness was not identified as a reason for non-payment. It is rather a matter of different perceptions when it comes to the responsibility and necessity of public institutions to pay.

One of the reasons different perceptions arise is the fact that often politicians tend to advertise water should be for free, which leads to changes in the consumers payment behavior (INT NGO, 2021). Furthermore, many people still have the perception that water is free due to historical reasons (INT GOV & WSP, 2021).

However, even though most public institutions know that they have to and should pay, certain reasons push them towards a non-payment behavior for the service they receive (INT NGO, GOV & WSP, 2021). This unwillingness to pay is often a matter of prioritization and also depends on the ability to receive alternative water supply in the case of disconnection (INT NGO, GOV, WSP, PUB & ASSOC, 2021).

Public institutions tend to prioritize covering other costs than water due to several factors. The person in charge of doing the payments might have a preference to divert the budget towards other sources. The willingness of police departments in the counties for example differs even though they receive money from the same source (INT NGO, 2021). Prioritization is often related to the fact that many public institutions have alternative water sources and thus do not rely on the water supplied by WSPs (INT NGO, GOV, PUB & ASSOC, 2021). In other cases, institutions receive delayed or not sufficient funding and are thus not unwilling to pay but prioritize investing the little available funds into salaries or electricity bills as result of the absence of any other possibility (INT NGO, GOV & ASSOC, 2021). This again is only possible if alternative water sources are available, i.e. illegal boreholes, rainwater harvesting or water from private vendors, which are usually more expensive (INT GOV & WSP, 2021).

Sometimes, willingness to pay depends on the service they receive from the provider. The poorer the quality, the more likely people tend not to pay (INT NGO & GOV, 2021). Unwillingness to pay can also be caused due to the fact that policies do not sufficiently cover the consequences of non-payment, which is why some government institutions say: "We are the government - even if you don't pay, the WSPs do nothing" (INT NGO, 2021). This behaviour is influenced by the aspects of governance, weak policies and attitude. The fact that people become aware about the non-payment of large public institutions can also contribute to their own unwillingness to pay. An interviewed NGO described the circumstance, where the military did not pay for its water, while at the same time they were reselling and distributing it to the neighbouring communities (INT NGO, 2021). Also "prisons and barracks were running irrigation schemes inside their compounds and not paying for the water" and „the airport is not paying" (INT NGO, 2021).

Overall, as derived from the interviews, people are aware of the issue of non-payment and its consequences. Especially schools and hospitals know that they have to pay and require a continuous water delivery to execute their own services (INT GOV, 2021). The overall awareness on that issue was enhanced in the past year through capacity building and awareness campaigns (INT NGO, GOV & ASSOC, 2021). Positive examples show that improvements have been made and that some public institutions set their highest priorities to budget for water (INT NGO, 2021). In the example of Nairobi, "the institutions belonging to the presidential office have become one of the best payers to some extent. This includes big institutions like the barracks, police etc." (INT GOV, 2021).

One of the main causes that lead to non-payment lies in the attitude and perception of people about the worth of water. One main influence on these factors is the restructuring of the water sector including

devolution in combination with commercialisation. Because all of these reforms were introduced within one decade, there was little time for people to adapt their mindset to the new structures and circumstances. Especially the perception that water should be free of charge was and still is challenging to overcome due to the fact that WSPs are public institutions themselves and thus belong to the government. With continuous promotion of politicians that water should be free of charge, non-payment is the result of a lack of awareness about the cost of water delivery and the reasons why public institutions should pay for water.

Financial resources

One other major cause of non-payment is the mismanagement of budgets on all levels. Many institutions are involved in the budget allocation process, resulting in a chain of delays once only one transfer was delayed at one end. Within the payment cycle from the national treasury over the parent ministries to the accounts of the respective institution, delays and missing funds occur. This whole financial process is also prone to corruption since untransparent flows facilitate people's incentives on diverting money into their own pockets. Furthermore there is a lack of financial resources already in the national budget, which gets displayed in too short budgets for all sectors. Budget allocation takes too long and many institutions claim insufficient budgets to cover all bills. Delayed or missing budgets often leave no other choice to public institutions than to prioritize other bills first or to use the available budget for salaries. Prioritization often depends on the enforced consequences of non-payment. As a result, public institutions face an accumulation of unpaid bills, which at the end are too high to pay at once.

Water service providers operation

Causes do not only lie on the customer but also on the provider's side. A water service provider is responsible to meter water consumption and to issue bills to its customers. Improper billing systems can result in institutions not receiving bills, receiving wrong bills and sometimes bills are not even sent out. Hereby, leakages in the pipe network and non-revenue water bring further challenges for WSPs in terms of their billing efficiency. Also malfunctioning meter readers or billing based on estimation cause wrong billings and contribute to unwillingness to pay. Furthermore old meter systems involving manual readings by employees can create collusive corruption between employees and the water users.

Policies in Kenya allow disconnection of water supply in the case of non-payment of water bills. However, the implementation of disconnection often becomes difficult because providers fear the involved risks with disconnecting certain customers and thus often do not execute disconnection. Thus, bills are often not paid because public institutions are aware that no consequence will follow. This circumstance leads to unwillingness to pay, but there is no other option provided by law than disconnection. In addition, causes for a bad performance from the provider side, which eventually leads to non-payment can be seen as twofold: The devolution brought challenges, often resulting in a lack of knowledge on how to operate as a business while being managed by the government. At the same time there's too little budget allocated towards the water sector and not enough budget allocated to the WSPs. Missing financial resources from the government restrict the ability of WSPs to increase and expand their service. When customers receive poor quality service, this fosters unwillingness to pay at all or to pay bills on time.

Governance (political interference, corruption)

Non-payment is the result of poor governance. Too many actors are involved in decision-making and budgeting processes without clear and accountable responsibilities. Prioritization towards other sectors than water continues and the bureaucracy to apply for supplementary governmental funding takes too long. Poor investment management makes it further difficult for WSPs to increase reliable water supply and to achieve the national target for 2030.

Impunity, lack of accountability and transparency leads to corruption and political interference in the issue of non-payment. Willingness to pay often depends on the people in charge of the payments and is an issue especially within public institutions on the local level and within the management structure of board directors. WSPs and WWDAs must sign the code of conduct, which is incorporated in the Kenyan Constitution, but there is still room for people still to act corrupt. Also from the customer side, some might prioritize other areas than water, especially when they have (illegal) alternative water sources on their property. Mismanagement of finances and underpayment is often the result of corruption and interference within public institutions, including WSPs.

Consequences

Consequences for water service providers

One main consequence identified for WSPs dealing with non-payments is a decline in performance as the provider is unable to cover its operating and maintenance expenses. Since government institutions are big customers, a large part of the WSPs (potential) turnover comes from them. Arrears can result in compromising the quality of services towards their customers. But, the lower a utility's performance, the lower the tariff granted by the regulator, the lower the revenue they can generate through paying customers. Weak financial liquidity furthermore has the consequence of the inability to pay their own bills or to execute major investment projects, increased non-revenue water and the reliance on government and donor support.

Also, when a WSP does not meet its collection efficiency targets, employees are more prone to get involved in corrupt actions such as the collusion with customers. Also the WSP might set priority to pay salaries rather than to expand service infrastructure. However, disconnecting customers in arrears has often shown little effect, as it makes the collection of arrears more difficult for WSPs due to tensions and demonstration of power in the customer-provider-relationship. Non-payment of water bills by public institutions is further reflected in the national performance in the water sector by slowing down progress in the realization of a right to water.

Consequences for public institutions

The primary consequence of non-payment for public institutions is the disconnection of water supply. Supply disconnection can also mean that the respective public institution, for instance health service can no longer fulfil its own mandate.

A long term consequence of non-payment is the deterioration of service quality provided by the WSPs. Nothing can operate without water, however, when the provided service quality is poor, the impact of disconnection might not be very high. Often the interruption has to be dealt with using alternative water sources as springs, rainwater harvesting, water tanks or purchasing water from private vendors at a comparatively high fee, which implies additional costs for institutions.

Discussion

The national strategy for the improvement of water service is to be maintained with a high priority, which is why it is also necessary to further emphasize the need of public institutions paying their water bills. This section discusses improvements regarding the overall legal framework and governance, but also for the WSPs operation. Besides, as one of the baselines for non-payment, embedding of integrity management in each sector is crucial for its sustainability. Therefore integrity capacity development should be effectively implemented to achieve integrity in the areas of customer relations, human resources management, operation and maintenance of the WSPs, governance and financial management.

Policies and governance

For accountable and transparent governance in the water sector the establishment of integrity standards is to be enforced among all involved stakeholders. Support of designated governmental (and non-governmental) committees are crucial for the implementation of integrity, as they are fostering dialogue and active communication. Furthermore, training and capacity building of the WSPs employees and board of directors has to take place. Promoting awareness and compliance management as well as providing tools on corporate governance including the individual stakeholders responsibilities and rights can be seen as examples.

A major contribution to reduce non-payment are clear policies and guidelines also on the budgeting process and in respect to the handling of non-payment. Hereby a special focus should lie on anti-corruption policies with stiff penalties in case of non-compliance as e.g. through codes of conducts or behaviour standards. County specific policies, which are responsive to the prevailing situation, could be supportive. In every case, it is important that the existing policies and guidelines are executed by all actors on all levels. Each employee is required to be involved in the strategy pursuit of integrity.

Furthermore, detailed job descriptions prevent confusion and mismanagement of tasks. To improve collection efficiency, the people in charge need to understand the payment cycle of individual public institutions and provide transparent budget related information as well as documentation of board meetings.

Strengthening of stakeholder relations and support from external actors

Mutual support among WSPs operating at different performance levels is of high importance. Guidelines on best practices in dealing with non-payment by public customers and overall revenue collection shall be established and disseminated among the WSPs as already practiced for instance by WASREB and WASPA. This could include requirements and best practices for billing and collection management, customer database management, integrity management etc.

To respond to delayed funds and missing financial resources, WASREB can take the role in facilitating this by granting a stable water tariff to WSPs. When external donors step in, the national government has to be required to sustainably grant conditional support in the provision of water services and to use the fund for the projected investment. Also the county government plays a key role in the performance of a WSP. Governments should operate at arm length of the WSPs, provide support when necessary and play a leading example in practicing non-interference. Furthermore, decisions that are made in the scope of changes within the water sector must be made more publicly available. Thus, the **media** plays an important role, also in terms of creating awareness about the importance to pay for water delivery. The engagement and sensitisation of the civil society through (public) media and social networks is another mechanism for exerting pressure on governmental institutions regarding the issue of non-payment, as the respective institutions are politically anxious to avoid negative publicity.

Improvements within the operational framework of water service providers

Improvements on the billing and payment system are recommended for WSPs. The operational framework of WSPs is crucial to avoid being prone to non-payment of water bills. WASREBs billing requirements need to be manifested and implemented within each WSP, ensuring the issuance of monthly bills or a minimum of one bill every two months. Faster follow up notifications on existing arrears have to be implemented and for a better overview of collection efficiency, separations about arrears and current collections have to be made. A prescription of billing systems for utilities and a monthly billing cycle restricts the space for accountability discussions. Furthermore the implementation of an electronic payment system in WSPs facilitates the reduction of corruption in the payment cycle. Nevertheless, it is necessary that a cash handling policy is implemented for cash payments.

Besides, **improvements in metering** are required. The implementation of minimum metering and billing requirements is crucial to ensure that customers pay for what they consume. This goes hand in hand with the reduction of non-revenue water. There are still challenges in disaggregating consumptions for different consumers, which is why for a more effective monitoring of water consumption and non-payments, the implementation of prepaid or smart meters has to be included into policies. Besides surmountable problems with software, the use of smart meters has proven to be successful, as a remotely induced disconnection of non-paying customers can be executed without physical interaction between the WSPs employees and the customers. Thus, the enforcement of disconnection would be applied, and collusive corruption prevented. But the necessary infrastructure within WSPs for that change has to get established and WSP employees have to get trained on how to monitor and implement these meter readers.

Improvements within the customer service and the handling of non-payment

Good customer support and complaint mechanisms are required in order to decrease non-payment. Satisfied customers usually pay their bills. But the service quality and regular monitoring need to be enhanced and alternatives for customers in case of supply interruption from the providers side have to be found. Also the reconnection process needs to be executed faster to give incentives for the customer to pay for outstanding bills. An active communication between WSPs employees and customers has to take place. Customers need to be sensitized on the importance of their payments for WSPs and the consequences of non-payment, thus transparent disconnection and reconnection procedures are needed. At the same time WSPs also need to show understanding that some public institutions do not pay because they receive delayed funds from the parent ministries, which is why WSP employees should be trained in how to handle non-paying customers e.g. in terms of designing payment plans or debt payment plans for their customers. The introduction of a standardized debt management system would be supportive to avoid different handlings with non-payment. In case of strict unwillingness to pay is discovered, WSPs also need to be stricter in executing disconnection in case of non-payment to avoid customers prioritizing other areas than water.

Furthermore, complaint management systems in public institutions, as *majivoice* established by WASREB, can foster transparency in the operation and management of WSPs. As currently the majority of complaints are related to metering, WSPs should transparently publish its policies regarding tariffs and operations. The implemented tariffs should be affordable to both the provider and the customer, considering the subsidy of consumer tariffs from the government to the respective WSPs. Integrity with regard to customer relations should also be provided with policies clarifying compensation of additional expenditures in the case of interruptions in water supply, e.g. due to roadworks.

Overall, the PEA on the Kenyan water sector supports that non-payment by governmental institutions is not a one-sided problem. It involves mismanagement within Kenya's budgeting system on all levels, handling of non-payment by policies, corruption within and outside the water utility and deficiencies in the billing and metering systems. Often it is not the unwillingness to pay of public institutions but missing or delayed budgets that create bottlenecks, forcing them to prioritize covering other costs than water first. Clear policies and guidelines on the budgeting process and in respect to the handling of non-payment are missing and transparent budgeting is necessary to create public trust and avoid corruption within financial transactions. There are too many actors involved in decision-making and budgeting processes, leading to poor governance and leave the actors without clear and accountable responsibilities. Prioritization towards other sectors than water continues and the bureaucracy to apply for supplementary governmental funding takes too long.

Impunity, lack of accountability and transparency leads to corruption and political interference in the issue of non-payment. However, also water utilities have the responsibility to meter water consumption

and to issue bills to their customers on time, which is also sometimes the reason why public institutions have not been able to pay, or why unwillingness to pay for water becomes an issue.

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