



**CENTRE FOR COMMUNITY
INITIATIVES**



**SANITATION WORKERS FINANCIAL INSECURITIES;
A CASE OF ARUSHA DEPOT GROUP (ADG)**

DECEMBER, 2024

Table of Content

List of Figures	v
List of Tables	vi
1 Introduction	1
1.1 Background of the Study.....	1
1.2 Problem Statement	2
1.3 Research Objectives.....	2
1.4 Significance of the Study	3
1.5 Research Significance	4
1.5.1 Contribution to Local and Global Understanding of Financial Insecurity in Sanitation Work	4
1.5.2 Empowering Sanitation Workers and Contributing to Policy Reforms	4
2 Literature Review	5
2.1 Overview of Existing Literature on Financial Insecurity in Sanitation Work, Focusing on Manual Emptiers.....	5
2.2 Key Studies on Challenges Faced by Sanitation Workers Globally	7
2.1.1 Financial Insecurity	7
2.1.2 Health and Safety Hazards	7
2.1.3 Lack of Social Protection	8
2.1.4 Infrastructure and Working Conditions	8
2.1.5 Stigma and Marginalization	8
2.3 Conclusion	9
2.4 Insights on Previous Interventions Addressing Similar Issues in Different Contexts	9
2.4.1 Improving Access to Financial Resources	9
2.4.2 Formalizing Employment and Strengthening Legal Protections	9
2.4.3 Health and Safety Interventions	10
2.4.4 Policy Reforms and Advocacy.....	10
2.4.5 Public-Private Partnerships and Infrastructure Development	11
2.5 Conclusion	11
3 Methodology.....	12
3.1 Research Design.....	12
3.1.1 Qualitative Research	12
3.1.2 Quantitative Research	13

3.2	Rationale for a Mixed-Method Approach.....	13
3.3	Data Collection Methods	13
3.4	Sampling Procedure	15
3.5	Data Analysis	18
3.5.1	Thematic Analysis for Qualitative Data.....	18
3.5.2	Statistical Analysis for Quantitative Data.....	19
3.5.3	Integration of Qualitative and Quantitative Data	20
3.6	Ethical Considerations	20
4	Findings.....	20
4.1	Nature of Financial Insecurity.....	20
4.1.1	Income Variability and Instability	20
4.1.2	Income Distribution by Source	22
4.1.3	Key Observations from Individual Income Analysis (April-May 2024)	23
4.1.4	Individual-Level Expense Analysis for Workers (April-May 2024).....	24
4.1.5	Individual-Level Expense Analysis for Workers (April-May 2024).....	26
4.2	Social Protection Gaps	27
4.2.1	Absence or Inadequacy of Social Security Schemes	27
4.2.2	Lack of Safety Nets and Financial Vulnerability	27
4.2.3	Impact of Stigmatization and Social Norms	27
4.3	Limited Access to Financial Services	28
4.3.1	Challenges Faced by Workers in Accessing Formal Financial Resources.....	28
4.3.2	Barriers to Accessing Financial Services	28
4.3.3	Coping Mechanisms and Informal Financial Practices.....	29
4.4	Impact on Livelihoods and Dignity of Sanitation Workers	29
4.4.1	Impact on Livelihoods: Affordability of Basic Needs	29
4.4.2	Impact on Dignity and Social Recognition.....	30
4.4.3	Coping Mechanisms and Strategies to Restore Dignity.....	31
4.5	Root Causes of Financial Insecurity Among Sanitation Workers.....	31
4.5.1	Systemic Factors.....	31
4.5.2	Historical and Structural Factors Contributing to Financial Insecurity.....	33
4.5.3	Insights from Stakeholder Interviews: Local Authorities and Regulations	33
4.5.4	Broader Economic and Social Structures	34
4.6	Innovative Solutions and Interventions for Financial Security.....	34

4.6.1	Global Best Practices	34
4.6.2	Worker-Driven Proposals	35
4.6.3	Feasibility and Scalability	36
4.6.4	Recommendations for Tailoring Interventions to Arusha	37
5	Discussion.....	38
5.1	Interpretation of Key Findings in Relation to Existing Literature	38
5.2	Implications for Sanitation Workers' Well-being	38
5.3	Implications for Advocacy and Future Research.....	39
5.4	Conclusion	39
6	Recommendations	39
6.1	Policy Recommendations.....	39
6.2	Practical Solutions	40
6.3	Capacity Building	41
7	Conclusion.....	42
7.1	Summary of Main Findings and Their Significance	42
7.2	Broader Implications for Sanitation Work Globally.....	43
8	References	45
9	Appendices.....	47
9.1	Research tools.....	47
9.2	Field report.....	54
9.3	Dissemination Report	56

List of Figures

Figure 1.1: Some of the Arusha Depot Group (ADG) members during emptying activities.	1
Figure 1.2: GK Focus Group Discussion (FGD) with the Arusha Depot Group	5
Figure 2.1: Sanitation service chain from the collection to treatment/disposal	6
Figure 4.1: Total Income by Worker Group	21
Figure 4.2: Average Daily Income by worker group	22
Figure 4.3: Income Distribution by Source.....	22
Figure 4.4: Individual income Analysis by Source.....	23
Figure 4.5: Total Income against Total Expenses for each Worker.....	26

List of Tables

Table 3.1: Table summarizing the sampling approach and criteria used for the various participants and stakeholders involved in the research	16
Table 4.1: Summary of total Expenses over Time	24
Table 4.2: Summary of average Daily Expenses	25
Table 4.3: Summary of expense Categorization	25

1 Introduction

1.1 Background of the Study

Sanitation work in Arusha plays a critical role in maintaining urban health and hygiene, but it has historically been underappreciated and, at times, stigmatized. The sanitation workers, often engaged in manual emptying, street sweeping, and sewer system maintenance, belong to an informal workforce that faces significant challenges, particularly financial insecurity and lack of recognition. Historically, manual emptying was considered illegal, subjecting workers to hazardous conditions, irregular payments, and societal stigmatization.

The Arusha Depot Group (ADG), formed in October 2022, is a collective of sanitation workers who previously operated independently under precarious conditions. The group initially started with five members, with support from the Arusha City Council and the Netherlands Development Organization (SNV). This collaboration provided them with essential equipment like the PITVAC machine, personal protective gear, and financial support to formalize their operations. The formation of ADG marked a significant shift in the recognition of sanitation work as a critical service to the city, elevating their status from marginalized workers to organized professionals. The group now has ten members and continues to attract more workers, unified by a shared goal of improving their financial security and living standards while providing essential sanitation services to the urban poor.



Figure 1.1: Some of the Arusha Depot Group (ADG) members during emptying activities.
(Source: SNV)

Through collective efforts, the group has enhanced its capacity to secure more customers and earn better incomes, although financial insecurity remains a pressing issue. Their work is vital to the community, particularly in informal settlements where access to formal sanitation services is

limited. Yet, their operations are still fraught with challenges, including irregular income, limited access to financial services, and inadequate social protection.

This study aims to explore the multifaceted dimensions of financial insecurity faced by sanitation workers in Arusha, with a particular focus on the ADG. It seeks to provide insights into income variability, social protection gaps, innovative solutions and best practices that can empower these workers and improve their overall well-being.

1.2 Problem Statement

The Arusha Depot Group (ADG) faces significant challenges, particularly in the area of financial insecurity. Despite the formalization of the group through collaboration with the Arusha City Council and the Netherlands Development Organization (SNV), which provided essential equipment and personal protective gear, the group's financial stability remains precarious.

One of the key issues is income variability. The ADG's work, primarily centered on manual emptying and sanitation services in Arusha's informal settlements, is highly irregular and seasonal. This variability in income, exacerbated by external factors such as nature of their business and weather conditions, makes it difficult for the group members to plan for their financial futures. We anticipate an increase in demand for emptying services during the rainy season; however, this is not the case for areas served by ADP. In these regions, the rainy season enables the community to discharge sludge into the streets, resulting in reduced demand for ADP's services. Additionally, competing informal workers, some of whom are unlicensed, provide cheaper alternatives

The absence of social protection systems further compounds the problem. The ADG members do not have access to health insurance, pension schemes, or any form of financial safety nets, leaving them vulnerable to personal emergencies and economic shocks. Additionally, due to the informal nature of their work, members struggle to access formal financial services, such as loans or savings accounts. This lack of financial resources prevents them from investing in essential tools and safety equipment or expanding their operations.

Another major challenge is the stigma and societal perception associated with their work. Historically, manual emptying was illegal, and although the ADG has been formalized, sanitation workers still face discrimination and are often viewed as performing undesirable work. This stigmatization affects their ability to attract business and undermines their dignity. Financial insecurity not only impacts their economic well-being but also reinforces social exclusion and diminishes their professional recognition.

These challenges underscore the need for systemic interventions aimed at improving the financial security of the ADG. Without regular income, access to social protection, and the ability to secure financial resources, the sustainability of the group and its members' livelihoods remain at risk.

1.3 Research Objectives

The primary objective of this study was to comprehensively investigate financial insecurity among sanitation workers in Arusha City, with a specific focus on the Arusha Depot manual emptiers group. The research sought to understand the challenges these workers faced, identify root causes

of their financial insecurity, and document innovative solutions to these issues. The following were the specific objectives of the research:

1. **To investigate and understand the nature and extent of financial insecurity experienced by the Arusha Depot manual emptiers group** This included examining income variability, access to financial resources, and the impact of financial instability on their livelihoods.
2. **To identify the root causes contributing to financial insecurity within the sanitation sector**
The study aimed to uncover underlying factors such as irregular income, lack of social protection, and limited access to financial services that exacerbate financial instability for sanitation workers.
3. **To explore and document innovative solutions and best practices that address financial insecurity** This objective focused on identifying existing interventions, both locally and globally, that could be adapted to the specific context of the Arusha Depot group.
4. **To actively engage sanitation workers in the research process**
The study involved sanitation workers as key partners in the research, ensuring their experiences and perspectives shaped the direction of the study and contributed to meaningful findings.
5. **To develop evidence-based recommendations to inform policy and regulatory reforms**
The study aimed to create actionable insights that could guide policy changes and advocacy efforts to safeguard the rights and improve the financial well-being of sanitation workers.

1.4 Significance of the Study

This study was significant in its potential to empower sanitation workers by providing a detailed analysis of their financial challenges and proposing practical solutions. By focusing on the Arusha Depot group, the research contributed to the growing body of knowledge on financial insecurity in the sanitation sector. The study's findings were expected to serve as a valuable resource for policymakers, sanitation worker organizations, and other stakeholders, both locally and globally, to advocate for improved working conditions and better financial security for sanitation workers.

The study aimed to influence policy reforms that would enhance access to financial services, provide social protection, and secure fair compensation for sanitation workers. Furthermore, by engaging sanitation workers as co-researchers, the study promoted worker agency, allowing them to play an active role in the decision-making processes that affect their livelihoods. The research was expected to foster a culture of knowledge sharing among sanitation worker organizations, facilitating the replication of successful approaches in other regions and contributing to global efforts to address financial insecurity in the sanitation sector.

1.5 Research Significance

This study holds significant value by contributing to both local and global understanding of financial insecurity among sanitation workers, particularly those in informal sectors such as the Arusha Depot manual emptiers group. By focusing on the specific challenges these workers face, the study provides a comprehensive examination of how financial instability affects their livelihoods and offers insights that are applicable beyond the local context.

Moreover, this research goes beyond conventional academic inquiry by actively involving sanitation workers in the study process. Rather than focusing solely on theoretical exploration, it shifts the attention from pure research to direct and practical engagement with the workers themselves. This approach ensures that their voices, experiences, and challenges are not only documented but also inform potential interventions and policy recommendations that can lead to tangible improvements in their working conditions and financial security.

The findings contribute to the broader discourse on labor in the sanitation sector, which is often marginalized and insufficiently addressed in policy frameworks. By emphasizing participatory involvement, this research fosters a more inclusive and actionable understanding of the financial challenges facing sanitation workers, bridging the gap between research and real-world impact.

1.5.1 Contribution to Local and Global Understanding of Financial Insecurity in Sanitation Work

The research has provided a detailed analysis of financial insecurity within the Arusha Depot group, highlighting the impacts of irregular income, limited access to financial resources, and the lack of social protection. These findings contribute to a deeper understanding of the economic challenges faced by sanitation workers in informal settings, a critical but often overlooked segment of the workforce. On a global scale, the study's outcomes extend the knowledge base on how financial insecurity in the sanitation sector intersects with issues of urban poverty, informal employment, and social exclusion, particularly in developing countries.

The documentation of these challenges adds value to global efforts aimed at addressing the financial vulnerabilities of sanitation workers, informing future research and policy development. Furthermore, the findings offer insights that are applicable to similar labor groups in other regions, making the research a valuable reference point for understanding and mitigating financial insecurity within the global sanitation workforce.

1.5.2 Empowering Sanitation Workers and Contributing to Policy Reforms

The research has empowered sanitation workers by actively involving them at every stage, ensuring their experiences and perspectives are central to the study's findings and recommendations. Through collaboration with local government authorities (LGAs), community leaders, and other stakeholders, the research team facilitated the identification of both registered and unregistered sanitation workers, ensuring inclusivity and accessibility for meetings and discussions. Workers also played a crucial role in shaping the research tools by providing valuable insights that refined survey instruments, interview guides, and data collection frameworks, ensuring that the study accurately captured their financial challenges. Their involvement extended to the dissemination phase, where they provided critical feedback that improved the final report and strengthened its recommendations. Beyond structured engagements, sanitation

workers continuously shared reflections and experiences that helped shape the study’s conclusions, ensuring that proposed interventions were practical and relevant to their realities. By incorporating their voices at all stages—coordination, data collection, tool refinement, and dissemination—this research moves beyond theoretical analysis to foster a collaborative, action-oriented approach that informs policy reforms and tangible improvements in their financial security and working conditions.



Figure 1.2: GK Focus Group Discussion (FGD) with the Arusha Depot Group

The recommendations derived from the research are designed to inform policy reforms at both local and national levels. These policy reforms aim to address critical issues such as formalizing employment contracts, improving access to social protection schemes, and enhancing access to financial services tailored to the needs of informal sanitation workers. By presenting evidence-based insights, the study serves as a foundation for advocating for meaningful changes in policies that safeguard the financial well-being and dignity of sanitation workers.

Globally, the findings have the potential to inform similar advocacy efforts in other regions, contributing to a more comprehensive approach to improving the working conditions and financial stability of sanitation workers. The research outcomes will not only benefit the Arusha Depot group but will also provide a reference for sanitation worker organizations, policymakers, and international bodies working to address the financial challenges faced by workers in similar sectors.

In conclusion, this study has the potential to create lasting impact by empowering sanitation workers in Arusha and contributing to policy reforms that enhance their financial security. The research findings are expected to resonate beyond the local context, informing global efforts to reduce financial insecurity in the sanitation sector.

2 Literature Review

2.1 Overview of Existing Literature on Financial Insecurity in Sanitation Work, Focusing on Manual Emptiers

Financial insecurity is a widespread issue among sanitation workers, particularly for those engaged in manual emptying of pit latrines and septic tanks. These workers are often employed informally, with no fixed wages or employment contracts, leading to unpredictable and unstable incomes. As noted by Philippe et al., (2022), manual emptiers in Africa and other regions frequently struggle with low and irregular earnings. For example, in Nigeria, manual emptier can

earn as little as NGN 750 (USD 1.82) per day, while mechanical emptiers and government employees enjoy higher, more stable incomes. This significant disparity in income levels reflects broader trends in the sector, where financial security is often linked to the type of sanitation work and employment status.

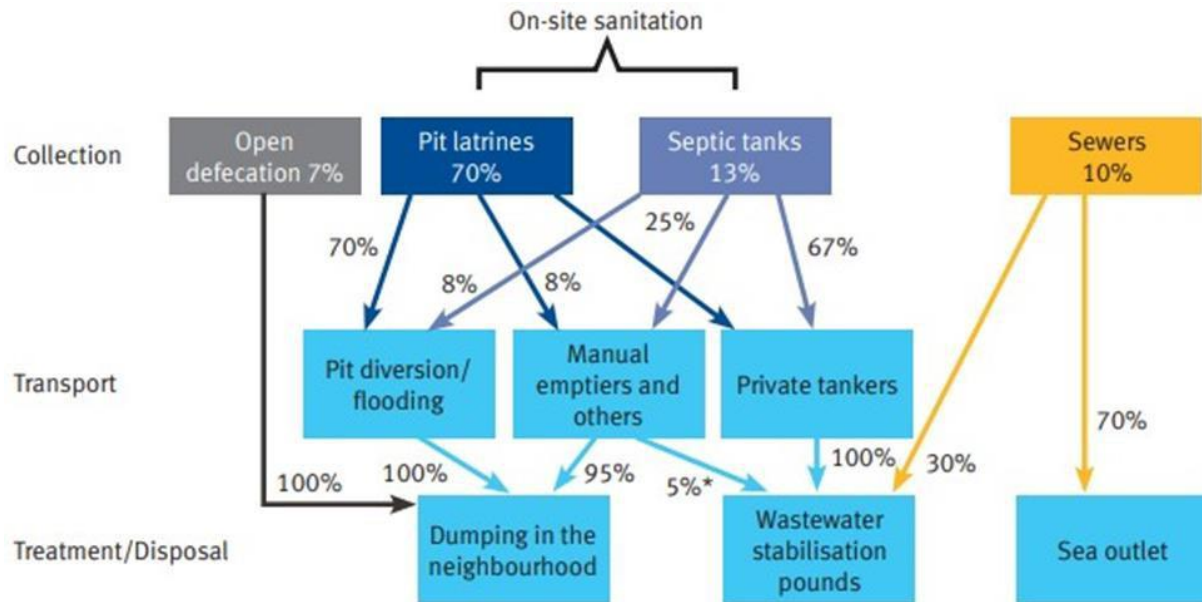


Figure 2.1: Sanitation service chain from the collection to treatment/disposal

Source: Bereziat., (2009), DAWASA (2008)

The type of work itself also adds to the financial challenges. Manual emptiers face additional expenses for basic tools, transportation, and in some cases, informal fees paid to access disposal facilities (World Bank, ILO, WaterAid, WHO, 2019). Their lack of access to financial services, such as loans or savings accounts, further exacerbates their vulnerability. With no access to formal banking, many manual emptiers resort to borrowing from informal lenders at high interest rates, which can trap them in cycles of debt.

Another contributing factor to financial insecurity is the lack of social protection. Manual emptiers, particularly those working informally, typically have no access to health insurance, pensions, or any form of safety net, which puts them at significant risk during emergencies. This leaves workers vulnerable to income shocks, such as health issues, which are common in sanitation work due to the hazardous nature of their tasks (Philippe, et al., 2022).

In Tanzania, as well as other countries with underdeveloped sanitation infrastructure, municipal governments often provide limited support for fecal sludge management. This forces households to rely on manual emptiers, who face inconsistent demand for their services. According to Sophie Trémolet and Binder, (2010), the cost of hiring a manual emptier in Dar es Salaam can range from TZS 27,000 (USD 18) to TZS 100,000 (USD 67) per visit, but the frequency of work depends

heavily on the size of the pit and the type of sanitation system used. During periods of low demand, manual emptiers often go without income for weeks, further contributing to their financial instability.

In summary, existing literature highlights the precarious financial situation of manual emptiers, driven by irregular incomes, lack of social protection, limited access to financial services, and inconsistent demand for their labor. These factors contribute to ongoing financial insecurity in the sector, calling for targeted interventions to improve their economic resilience and overall well-being.

2.2 Key Studies on Challenges Faced by Sanitation Workers Globally

Sanitation workers around the world face numerous challenges, including financial insecurity, health risks, lack of social protection, and inadequate access to personal protective equipment (PPE). Various studies have documented these challenges, highlighting the vulnerabilities of this often-overlooked workforce.

2.1.1 Financial Insecurity

One of the most pressing issues for sanitation workers is financial insecurity. A study by the World Bank, ILO, WaterAid, and WHO., (2019) underscores the precarious financial conditions of sanitation workers, particularly manual emptiers, whose incomes are typically low and highly unstable. The study highlights how informal employment arrangements exacerbate financial insecurity, with workers often lacking fixed wages, formal contracts, or access to financial services. This leaves them vulnerable to irregular income flows and economic shocks. As Philippe et al., (2022) noted, manual emptiers in Africa often earn well below minimum wage and face significant difficulties accessing financial tools such as loans and savings accounts, which are crucial for improving their economic stability.

In addition, a study by Sophie Trémolet and Diane Binder, (2010) focused on sanitation workers in Dar es Salaam, Tanzania, found that manual emptiers faced irregular demand for their services, leading to inconsistent earnings. The cost of emptying a pit latrine varied significantly, and during periods of low demand, workers went for weeks without income. This financial uncertainty was compounded by the fact that many of these workers were informally employed and lacked access to social protections or financial support.

2.1.2 Health and Safety Hazards

Health and safety risks are another major challenge for sanitation workers. Workers are routinely exposed to hazardous environments, including toxic gases, chemicals, and disease-causing pathogens, while cleaning septic tanks, sewers, and latrines. The Awuni, (2020) study highlights the dangerous conditions under which sanitation workers operate, with many suffering from respiratory problems, skin infections, and chronic health conditions due to prolonged exposure to unsanitary environments. In severe cases, workers have died from exposure to toxic gases such as ammonia and hydrogen sulfide in septic tanks.

The lack of personal protective equipment (PPE) further aggravates these risks. In many low- and middle-income countries, sanitation workers, particularly manual emptiers, often work without gloves, boots, or masks, leaving them vulnerable to both short-term and long-term health hazards.

A study by Philippe et al., (2022) revealed that only 25% of manual emptiers in Nigeria reported using PPE, and similar conditions were observed in Tanzania, where workers relied on old, worn-out clothes instead of proper protective gear.

2.1.3 Lack of Social Protection

The absence of social protection is a recurring issue in studies on sanitation work. Many sanitation workers, particularly those employed informally, lack access to health insurance, pensions, and other safety nets. This leaves them vulnerable to economic shocks, such as illness or injury, which can lead to financial ruin. The World Bank, (2019) reported that in many countries, sanitation workers are not entitled to social security benefits due to the informal nature of their employment. This lack of protection makes it difficult for workers to access healthcare services or afford basic necessities during periods of illness or unemployment.

Philippe et al., (2022) further noted that sanitation workers in Africa, particularly those working in manual emptying, rarely have access to healthcare services. Informal workers were less likely to be vaccinated against occupational illnesses or to seek medical attention when needed due to the cost and unavailability of healthcare services. This contributed to a cycle of poor health and financial insecurity, as workers often had to continue working despite being sick or injured.

2.1.4 Infrastructure and Working Conditions

Studies have also highlighted the infrastructural challenges that sanitation workers face. A lack of fecal sludge treatment plants (FSTPs) and inadequate disposal facilities means that workers are often forced to dump waste unsafely, which not only affects public health but also increases the stigma attached to their profession. Philippe et al., (2022) found that in many African cities, sanitation workers lacked access to safe disposal sites, leading to unsafe practices like dumping fecal sludge into rivers or open spaces.

In addition to poor disposal infrastructure, sanitation workers often lacked basic working facilities such as office space, parking, and proper storage for equipment. This not only reduced their operational efficiency but also diminished their professional dignity, making them more vulnerable to discrimination and marginalization.

2.1.5 Stigma and Marginalization

Several studies have documented the stigma and marginalization faced by sanitation workers globally. In many cultures, manual sanitation work is associated with low social status, and workers are often stigmatized and excluded from social and economic opportunities. The World Bank, (2019) noted that this stigma leads to poor working conditions, low pay, and a lack of respect for sanitation workers. In countries like India and Bangladesh, manual scavengers—who clean dry latrines and handle untreated human waste—face extreme social ostracism and are often trapped in a cycle of poverty due to their profession.

This marginalization is further exacerbated by the lack of formal recognition and legal protections for sanitation workers. Studies, including those by Sharada Prasad and Ray, (2019), have called for the formalization of sanitation worker, with clear legal protections to ensure fair wages, safe working conditions, and access to social protection. However, progress in this area has been slow, particularly in low-income countries where informal employment dominates the sector.

2.3 Conclusion

The literature reveals that sanitation workers face a complex set of challenges, ranging from financial insecurity and health risks to inadequate infrastructure and social marginalization. Addressing these challenges requires a multifaceted approach that includes policy reforms, infrastructure investments, and enhanced social protection for workers. By highlighting these global challenges, the studies reviewed provide valuable insights for future interventions aimed at improving the lives and working conditions of sanitation workers worldwide.

2.4 Insights on Previous Interventions Addressing Similar Issues in Different Contexts

Efforts to address the challenges faced by sanitation workers, particularly manual emptiers, have been implemented in various countries and contexts. These interventions have focused on improving working conditions, increasing access to financial resources, providing social protection, and reducing the health risks associated with sanitation work. This section reviews key interventions that have aimed to alleviate the financial insecurity, health hazards, and social marginalization experienced by sanitation workers globally.

2.4.1 Improving Access to Financial Resources

One of the significant barriers for sanitation workers, especially manual emptiers, has been the lack of access to financial services such as loans, savings, and insurance. Interventions aimed at facilitating links between sanitation workers and financial institutions have shown promise. For example, in Nigeria, sanitation workers were introduced to microfinance programs that enabled them to access small loans to invest in safety equipment, improve their tools, and stabilize their income (Philippe et al., 2022). These financial tools not only helped the workers cope with irregular income but also allowed them to improve the efficiency and safety of their operations.

In India, similar microfinance initiatives were launched to support sanitation workers in purchasing protective gear and modernizing their equipment. This reduced the need for unsafe manual labor, such as cleaning sewers and septic tanks without proper safety mechanisms, while also providing workers with the financial flexibility to withstand periods of low demand (Sharada Prasad and Ray, 2019). These interventions have highlighted the importance of integrating sanitation workers into formal financial systems. By improving their financial literacy and access to banking services, sanitation workers are better equipped to manage income variability and reduce their dependence on informal lenders, who often charge exorbitant interest rates.

2.4.2 Formalizing Employment and Strengthening Legal Protections

Another key area of intervention has been the formalization of sanitation work, which aims to provide sanitation workers with legal protections, including access to pensions, health insurance, and formal contracts. In South Africa, the eThekweni Municipality in Durban pioneered an initiative to formalize the employment of manual emptiers through government contracts, ensuring that workers received regular wages, protective gear, and access to healthcare services (Philippe et al., 2022).

Formalization efforts in India, through the Safai Karmachari Andolan (SKA), have advocated for the abolition of manual scavenging, while also securing formal employment and legal protections

for sanitation workers. These reforms have been instrumental in reducing the social stigma associated with sanitation work and improving the financial and social security of workers (Sharada Prasad and Ray, 2019). Similarly, in Tanzania, efforts to integrate manual emptiers into municipal sanitation services through formal contracts have improved their financial security by ensuring consistent pay and benefits (World Bank, 2019).

The success of these interventions underscores the need for governments and local authorities to recognize sanitation workers as formal employees deserving of legal rights and protections. This includes ensuring that workers receive fair wages, health benefits, and access to social security, which are critical in mitigating the financial and health risks inherent in their work.

2.4.3 Health and Safety Interventions

Given the dangerous nature of sanitation work, improving health and safety conditions has been a focus of many interventions. In India and Bangladesh, organizations such as WaterAid and the World Bank have implemented programs to provide sanitation workers with personal protective equipment (PPE) and training on safe waste handling practices (Sharada Prasad and Ray, 2019). These programs also introduced mechanized equipment, such as vacuums and "gulpers," that reduced the need for direct human contact with waste, thereby minimizing the health risks associated with manual emptying.

In Tanzania, the introduction of affordable mechanized equipment, such as the gulper (a motorbike with a tank used for safe latrine waste removal), has been an innovative solution to both health risks and financial challenges. The use of the gulper reduces the physical strain on workers and improves the efficiency of their work, allowing them to earn more by serving additional households (Sophie Trémolet and Binder, 2010). This intervention demonstrated the potential of low-cost technology to enhance both the safety and income stability of sanitation workers.

Moreover, training and awareness campaigns on the importance of PPE use have been implemented in countries like Nigeria, where sanitation workers were taught about the health risks they face and the protective measures they can take to mitigate those risks. Although adoption of PPE remains low, these interventions have laid the groundwork for improving worker safety by raising awareness of occupational hazards (Philippe et al., 2022).

2.4.4 Policy Reforms and Advocacy

Advocacy and policy reforms have played a pivotal role in addressing the systemic issues affecting sanitation workers. In India, the "Prohibition of Employment as Manual Scavengers and their Rehabilitation Act" of 2013 was a landmark policy that aimed to eliminate manual scavenging and provide rehabilitation support to workers transitioning to safer and more dignified employment (Sharada Prasad and Ray, 2019). The Act also promoted financial assistance, skill development programs, and alternative livelihood options for former manual scavengers.

In Sub-Saharan Africa, policy reforms have focused on improving the enforcement of labor laws that protect the rights of sanitation workers. For example, in South Africa, the government introduced regulations to improve working conditions for sanitation workers in urban municipalities, including the provision of healthcare and retirement benefits (Philippe et al., 2022).

These policy interventions have helped to formalize the sanitation workforce and ensure that their contributions are recognized and protected by law.

Advocacy groups and labor unions have also been instrumental in pushing for the recognition of sanitation workers' rights. In many regions, these groups have fought for better wages, safer working conditions, and access to financial services. Their efforts have raised public awareness about the critical role sanitation workers play in public health, helping to reduce the stigma associated with their work and improve their overall working conditions.

2.4.5 Public-Private Partnerships and Infrastructure Development

Investments in sanitation infrastructure have been another focus area, with interventions targeting the development of fecal sludge treatment plants (FSTPs) and safe disposal sites for waste. In countries like Bangladesh and Tanzania, partnerships between local governments and private companies have led to the construction of FSTPs, which provide a safe, centralized location for the disposal of fecal sludge (Sophie Trémolet and Binder, 2010). These facilities not only improve public health by reducing environmental contamination but also provide sanitation workers with a safer, more dignified place to discharge waste.

In South Asia, public-private partnerships have facilitated the adoption of low-cost mechanized equipment for manual emptiers, further reducing the physical and health burdens associated with their work. By providing access to this equipment through subsidized programs or microloans, these partnerships have helped workers increase their productivity and earnings while improving their working conditions.

2.5 Conclusion

Previous interventions addressing the challenges faced by sanitation workers have varied across different contexts, but common themes include the importance of improving access to financial resources, formalizing employment, enhancing worker safety, and advocating for policy reforms. These interventions demonstrate that a multifaceted approach is necessary to address the systemic issues facing sanitation workers. Moving forward, continued investment in infrastructure, financial inclusion, and legal protections will be essential to improving the financial and social security of sanitation workers globally.

3 Methodology

3.1 Research Design

This research employed a **mixed-method approach**, integrating both qualitative and quantitative data collection methods to gain comprehensive insights into the financial insecurity experienced by sanitation workers, particularly manual pit emptiers, in Arusha City. By utilizing both qualitative and quantitative approaches, the study aimed to capture the nuanced financial challenges faced by these workers and to explore potential solutions that could be applied to improve their financial well-being.

3.1.1 Qualitative Research

The qualitative aspect of the study was designed to engage directly with key stakeholders and capture the lived experiences of sanitation workers. This approach allowed for an in-depth understanding of financial insecurity from the perspectives of both the workers themselves and the organizations involved in sanitation work in Arusha. The primary qualitative methods used included key informant interviews, in-depth interviews, focus group discussions, and direct observations, ensuring that multiple sources of qualitative data were collected to corroborate findings.

- 1. Key Informant Interviews (KII):**

Key informant interviews were conducted with 12 respondents, including representatives from local government authorities (e.g., Arusha City Council, AUWSA), non-governmental organizations (e.g., SNV), academic institutions (e.g., Nelson Mandela University), financial institutions (banks and micro-finance institutions), and community leaders. These interviews aimed to capture insights from various perspectives on the systemic challenges that contribute to financial insecurity among sanitation workers and to explore opportunities for policy and operational improvements.

- 2. In-depth Interviews:**

Six in-depth interviews were conducted with members of the Arusha Depot group and manual pit emptiers. These interviews allowed for the collection of detailed personal experiences, focusing on how financial insecurity affected their livelihoods, their strategies for coping with irregular income, and their aspirations for improving their financial stability. This method provided a deeper understanding of individual challenges and potential solutions.

- 3. Focus Group Discussions (FGDs):**

FGDs were held with nine members of the Arusha Depot group to gather collective insights into the financial issues facing sanitation workers. The discussions explored common challenges, experiences with current interventions, and suggestions for improving financial management and stability. The participatory nature of FGDs enabled an open exchange of ideas, facilitating a deeper exploration of shared problems and potential solutions.

- 4. Field Observations:**

Field observations were conducted to assess the real-world conditions in which sanitation

workers operate. This method involved observing the use of protective equipment, the functioning of semi-mechanized emptying machines, and the general working environment. Observations were crucial for validating the information obtained through interviews and discussions, offering a practical lens through which the researchers could assess the effectiveness of existing interventions.

3.1.2 Quantitative Research

While the qualitative data provided rich insights into the challenges faced by sanitation workers, quantitative data were collected to capture more objective, measurable aspects of their financial situation. Quantitative data were gathered primarily through the use of **financial diaries**, which allowed for a systematic recording of income, expenses, and financial transactions over a two-month period.

1. Financial Diaries:

Financial diaries were distributed to members of the Arusha Depot group to record daily income, expenditures, loans, and repayments. This method was applied to track financial flows and assess the extent of financial insecurity among the workers. By collecting financial data over a period of time, the research team was able to analyze income variability, spending patterns, and debt levels, contributing to a more comprehensive understanding of the financial realities faced by sanitation workers.

3.2 Rationale for a Mixed-Method Approach

The mixed-method approach was chosen to ensure that the research captured both the subjective experiences of sanitation workers and the objective financial data that could inform actionable recommendations. The combination of qualitative and quantitative methods allowed the researchers to triangulate findings, enhancing the reliability and validity of the data. This comprehensive approach also ensured that the research could address the complexities of financial insecurity from multiple angles, providing a well-rounded foundation for developing evidence-based interventions.

3.3 Data Collection Methods

The research employed a variety of qualitative data collection methods to ensure comprehensive and reliable insights into the financial insecurity experienced by sanitation workers in Arusha City. The methods included **in-depth interviews**, **financial diaries**, **focus group discussions (FGDs)**, and **key informant interviews (KIIs)**. These methods were strategically selected to capture a wide range of perspectives, from individual experiences of financial insecurity to broader systemic challenges as perceived by local authorities, financial institutions, and non-governmental organizations (NGOs).

a. In-depth Interviews

In-depth interviews were conducted with members of the Arusha Depot Group (ADG), including both manual pit emptiers and beneficiaries of their services. These interviews focused on the personal experiences of financial insecurity, daily income patterns, challenges in accessing

financial services, and the broader impacts of income instability on workers' livelihoods. The interviews also explored personal coping strategies, aspirations for financial security, and suggestions for interventions to improve their economic well-being.

The objective of the in-depth interviews was to gather detailed, individualized accounts that would contribute to a nuanced understanding of the financial instability among sanitation workers. The interviews were conducted with six respondents, consisting of four men and two women, and were recorded using questionnaires and manual note-taking tools. The results of these interviews provided key qualitative data for identifying trends and unique challenges faced by sanitation workers in their day-to-day operations.

b. Financial Diaries

Financial diaries were utilized as a quantitative tool to track the income, expenses, and financial transactions of sanitation workers over a two-month period. These diaries enabled participants to record detailed daily data on their financial activities, allowing researchers to assess income variability, spending patterns, and overall financial health.

The diaries were distributed to members of the Arusha Depot Group, and participants were guided on how to record their financial data. Each diary included sections for daily income from different sources (including sanitation work and other informal employment), expenditures, loans, and repayments. By tracking this information over time (2 months), the research team was able to quantify the level of financial insecurity experienced by sanitation workers and identify patterns in income fluctuation, saving habits, and debt levels. This method provided valuable insights into the day-to-day financial realities of sanitation workers, which complemented the qualitative data obtained from interviews and focus group discussions.

c. Focus Group Discussions (FGDs)

Focus group discussions were conducted with the members of the Arusha Depot Group to gather collective insights into the challenges and opportunities related to financial insecurity in their work. FGDs allowed participants to share their experiences and perspectives in a group setting, facilitating a dynamic exchange of ideas and the identification of shared challenges and solutions.

The FGD included nine participants, composed of eight men and one woman, and covered a range of topics, including the financial challenges they face, existing coping mechanisms, the effectiveness of current interventions, and potential solutions for improving financial stability. FGDs also allowed the research team to gather information on group financial management practices, including how members of the group pool resources, manage expenses, and handle income variability.

The FGD method was instrumental in identifying common themes across participants, such as the impact of irregular income on daily life, the challenges of accessing formal financial services, and the strategies used by sanitation workers to cope with financial insecurity.

d. Key Informant Interviews (KIIs)

Key informant interviews were conducted with representatives from local authorities, financial institutions, and NGOs involved in sanitation work in Arusha City. These interviews provided valuable insights into the broader policy and economic landscapes that shape the financial security of sanitation workers. The stakeholders interviewed included representatives from the Arusha City Council, AUWSA (Arusha Urban Water and Sanitation Authority), EWURA (Energy and Water Utilities Regulatory Authority), financial institutions such as National Microfinance Bank (NMB) and CRDB, academic institutions like Nelson Mandela University, and NGOs such as SNV and World Vision.

The KIIs aimed to understand the systemic challenges that sanitation workers face, including issues related to payment systems, access to financial services, legal protections, and social security benefits. These interviews helped identify opportunities for policy reforms, potential partnerships with financial institutions, and areas where government and non-governmental stakeholders could provide additional support to improve the financial stability of sanitation workers.

e. Field Observations

Field observations were conducted to validate the information provided in interviews and focus group discussions. These observations focused on the working conditions of sanitation workers, including the use of personal protective equipment (PPE), the operational efficiency of the semi-mechanized emptying machines, and the overall environment in which the workers operated. Observations helped the research team to verify the real-world conditions under which sanitation workers perform their duties and provided a practical perspective on the challenges they face.

Through these comprehensive data collection methods, the research team was able to capture both individual and collective experiences of financial insecurity among sanitation workers in Arusha City. The use of multiple methods ensured that the data gathered were both deep and broad, providing a holistic view of the financial challenges faced by the manual emptiers and potential solutions that could improve their financial stability. Notably, sanitation workers actively supported the data collection process, with five out of the nine research team members being sanitation workers themselves. Their involvement was instrumental in facilitating fieldwork, supporting observations, responding to queries from street leaders, and providing crucial guidance on navigating different areas of the city, leveraging their local knowledge and experience. This participatory approach not only enriched the data collection process but also ensured that the study remained grounded in the realities of their work environment.

f. Dissemination Workshop: Launching National Guidelines for Safeguarding the Health, Safety, and Dignity of Sanitation Workers in Tanzania

As part of the research methodology, a **dissemination workshop** was conducted in Shinyanga, Tanzania, from the 25th to 26th of September 2024. This workshop, which focused on launching the National Guidelines for Safeguarding the Health, Safety, and Dignity of Sanitation Workers, played a crucial role in sharing the findings of this study and facilitating engagement with key stakeholders. The workshop brought together sanitation workers, local government representatives, non-governmental organizations (NGOs), financial institutions, and other sector experts.

3.4 Sampling Procedure

The sampling procedure for this research was designed to ensure a representative and inclusive selection of participants from the **Arusha Depot group** and relevant stakeholders. The aim was to capture diverse perspectives on the financial insecurity faced by sanitation workers while ensuring that the participants reflected the broader population of stakeholders involved in the sanitation sector in Arusha City.

Table 3.1: Table summarizing the sampling approach and criteria used for the various participants and stakeholders involved in the research

Sampling Component	Method Used	Selection Criteria	Number of Respondents	Rationale
Sanitation Workers	Simple Random Sampling	Randomly selected (7 out of total 9) members of the Arusha Depot group.	7 respondents (6 male, 1 female)	Ensures that all members have an equal chance of being selected, minimizing selection bias.
Sanitation Workers (Leadership)	Purposive Sampling	Leadership roles such as chairman, accountant, and long-serving members.	Specific key members of the Arusha Depot group	To gather insights from those with a deeper understanding of group financial and operational issues.
Sanitation Workers (Gender)	Purposive Sampling	Ensure representation of both male and female participants.	Included 1 female worker - Lightness Loi	Ensures gender diversity to capture the unique financial challenges faced by female workers.
Sanitation Workers (Roles)	Purposive Sampling	Include workers who perform various roles (mainly manual pit emptiers but sometimes double as street sweepers, etc.).	At least 3 workers performs multiple sanitation roles	Allows the capture of diverse challenges across different types of sanitation work that they perform.
Government Representatives	Purposive Sampling	Local Government Authorities (Arusha City Council, Ngarenaro Ward,	Representatives from LGAs and AUWSA	To provide insights on the regulatory and financial frameworks

		Darajani Settlement).		impacting sanitation workers.
Financial Institutions	Purposive Sampling	Representatives from financial institutions (NMB, CRDB).	Loan officers from NMB and CRDB	To discuss barriers to accessing financial tools for sanitation workers.
Non-Governmental Organizations	Purposive Sampling	Representatives involved in sanitation work and WASH projects.	Representatives from SNV and World Vision	To provide input on existing interventions and solutions aimed at improving sanitation workers' financial security.
Academic Institutions	Purposive Sampling	Sanitation expert from Nelson Mandela University.	1 sanitation expert	To provide an academic perspective and contribute to evidence-based recommendations.
Community Groups	Purposive Sampling	Representatives from Tanzania Federation for the Urban Poor (TFUP).	4 respondents (2 male, 2 female)	Provides a grassroots perspective on community views on sanitation work and its economic value.
Key Informant Interviews (KIIs)	Simple Random Sampling	Stakeholders from government institutions, NGOs, financial institutions, and academia.	12 respondents (9 male, 3 female)	To gather a broad perspective from key stakeholders in the sanitation sector.
Focus Group Discussions (FGDs)	Convenience Sampling	Participants from the Arusha Depot group available at the time of the workshop.	9 participants (8 male, 1 female)	Provides collective insights and shared experiences among sanitation workers.

3.5 Data Analysis

The data analysis for this research employed both **thematic analysis** for qualitative data and **statistical analysis** for quantitative data. This mixed-method approach was used to ensure that the study comprehensively captured the financial insecurity faced by sanitation workers and the broader challenges within the sector.

3.5.1 Thematic Analysis for Qualitative Data

Thematic analysis was employed to analyze the qualitative data gathered from **key informant interviews (KIIs)**, **in-depth interviews**, **focus group discussions (FGDs)**, and **field observations**. This method allowed the research team to identify recurring patterns, themes, and insights from the qualitative responses.

- **Process of Thematic Analysis:**

1. **Data Familiarization:** The research team first transcribed the interview and discussion recordings and reviewed the field notes to become familiar with the collected data.
2. **Coding:** Key themes and patterns were coded based on the responses from participants. These codes represented common topics such as "financial instability," "income variability," "lack of financial services," and "health risks."
3. **Theme Identification:** The codes were then grouped into overarching themes that captured the essence of the challenges faced by sanitation workers. For example, the theme "financial insecurity" emerged from discussions about irregular income, loan dependency, and limited access to savings.
4. **Theme Analysis and Interpretation:** The final themes were analyzed in relation to the research objectives. The analysis focused on understanding how the identified themes contributed to financial insecurity and the potential solutions suggested by participants.
5. **Use of Quotes:** Throughout the analysis, direct quotes from participants were used to support the identified themes, providing an authentic voice to the data and illustrating the real-world experiences of sanitation workers.

- **Key Themes Identified:**

- **Income Variability:** Discussions about the unpredictable nature of sanitation work, especially manual emptying, highlighted significant variations in income due to seasonal factors, irregular demand, and job availability.
- **Limited Access to Financial Resources:** Many sanitation workers reported difficulty accessing formal financial services such as loans and savings accounts, which contributed to ongoing financial insecurity.

- **Health and Safety Risks:** Several participants emphasized the health risks they faced due to inadequate personal protective equipment (PPE) and exposure to hazardous materials during manual emptying operations. However, this was not necessarily due to a lack of training, as they had received training beforehand. Rather, the primary reasons included financial constraints that prevented them from reinvesting in PPE when it became worn out, behavioral tendencies where workers were not accustomed to consistently using PPE during operations, and the quality of available PPE, which sometimes made their work more difficult. These factors collectively contributed to unsafe practices despite prior training efforts.
- **Social Stigma and Professional Dignity:** The social stigma attached to sanitation work emerged as a critical theme, affecting workers' self-esteem and the value they placed on their profession.

3.5.2 Statistical Analysis for Quantitative Data

Quantitative data was gathered primarily through **financial diaries** maintained by the sanitation workers. These diaries tracked their daily income, expenses, loan repayments, and savings over a two-month period. Statistical analysis was used to assess the financial patterns and challenges faced by sanitation workers, enabling a deeper understanding of the financial instability they experience.

- **Process of Statistical Analysis:**

1. **Data Entry:** The data from the financial diaries were entered into a statistical software program (Excel) for analysis. This included daily income amounts, expense categories, and loan repayments.
2. **Descriptive Statistics:** Basic descriptive statistics, such as means, medians, and standard deviations, were calculated to understand the average income, expenditure, and savings of sanitation workers. This provided an overall picture of their financial situation.
3. **Income and Expense Patterns:** The data were analyzed to identify patterns in income variability, expenses, and loan repayments. For example, the analysis revealed whether sanitation workers faced periods of high income followed by low-income stretches, highlighting financial instability.
4. **Correlations:** Correlations were explored between variables such as income variability, loan dependency, and expenditure patterns. This helped identify whether financial instability was linked to specific factors like high-interest loans or seasonal job fluctuations.
5. **Graphical Representation:** The results of the statistical analysis were visually represented using graphs and charts. This helped to illustrate the income variability over the two-month period, the proportion of income spent on basic needs, and the impact of loans on financial security.

- **Key Statistical Findings:**
 - **Income Fluctuations:** The quantitative analysis confirmed that sanitation workers' income was highly variable, with significant fluctuations from month to month. These variations were closely tied to the availability of manual emptying jobs, which were influenced by seasonal factors.
 - **High Expenditure on Basic Needs:** The analysis showed that a large portion of workers' income was spent on basic needs such as food, rent, and transportation, leaving little room for savings (only one member out of all indicated to have tried to save in the past) or investments in their businesses.
 - **Loan Dependency:** The data highlighted the heavy reliance of sanitation workers on loans to cover expenses during periods of low income. However, most sanitation workers did not secure loans from formal financial institutions, as the stringent requirements made access difficult. Instead, they primarily relied on borrowing from family and friends to manage financial shortfalls. Those who attempted to obtain commercial loans from banks encountered significant barriers, including the requirement to provide collateral, high-interest rates, and complicated loan approval processes. In some instances, sanitation workers suffered severe financial consequences, such as losing personal property. One worker shared that after failing to meet loan repayments, they were forced to sell a plot of land they had used as collateral. These challenges further exacerbated their financial insecurity, making it difficult for them to reinvest in their work, purchase protective equipment, or improve their overall economic stability.

3.5.3 Integration of Qualitative and Quantitative Data

The mixed-method approach allowed for a comprehensive analysis by integrating insights from both qualitative and quantitative data. The qualitative themes provided context and depth to the quantitative findings, while the quantitative data added precision to the qualitative narratives. For example:

- The **theme of income variability** identified through interviews was reinforced by the **statistical analysis** showing significant monthly fluctuations in income.
- The **theme of loan dependency** from interviews was further supported by financial diary data, which revealed high loan repayment amounts relative to workers' income.

This integration of data allowed for a holistic understanding of the financial insecurity challenges faced by sanitation workers and informed the development of targeted recommendations to address these issues.

3.6 Ethical Considerations

The ethical considerations for this research focused on ensuring informed consent, data confidentiality, and participants' anonymity. All participants were fully briefed on the research objectives and their role in it, and participation was entirely voluntary. Written and verbal consent were obtained, with participants being free to withdraw from the study at any time without consequences.

Confidentiality was maintained by securely storing all data and restricting access to authorized personnel only. Data were used exclusively for this research, and sensitive information was anonymized to prevent the identification of individual participants. Pseudonyms and codes were used in reporting to ensure that personal details remained confidential.

The dignity of participants was respected throughout the research process. The research team used a culturally sensitive, non-judgmental approach during interviews and focus group discussions. Ethical approval was obtained before the study commenced, ensuring the research followed established guidelines to protect participants' rights and minimize any potential harm or distress.

4 Findings

4.1 Nature of Financial Insecurity

4.1.1 Income Variability and Instability

The financial diaries and interviews with sanitation workers from the Arusha Depot group revealed significant income variability, with workers experiencing fluctuations in income due to the

inconsistent availability of work and reliance on multiple, unstable income sources. For example, workers categorized as "high earners" typically had diversified income streams, including salaries, casual labor, and allowances from business or meetings. These workers had a more stable financial outlook, with monthly incomes exceeding TZS 900,000 during April and May 2024. In contrast, "low earners," who primarily relied on casual work and small business ventures, earned less than TZS 400,000 during the same period, leaving them financially vulnerable.

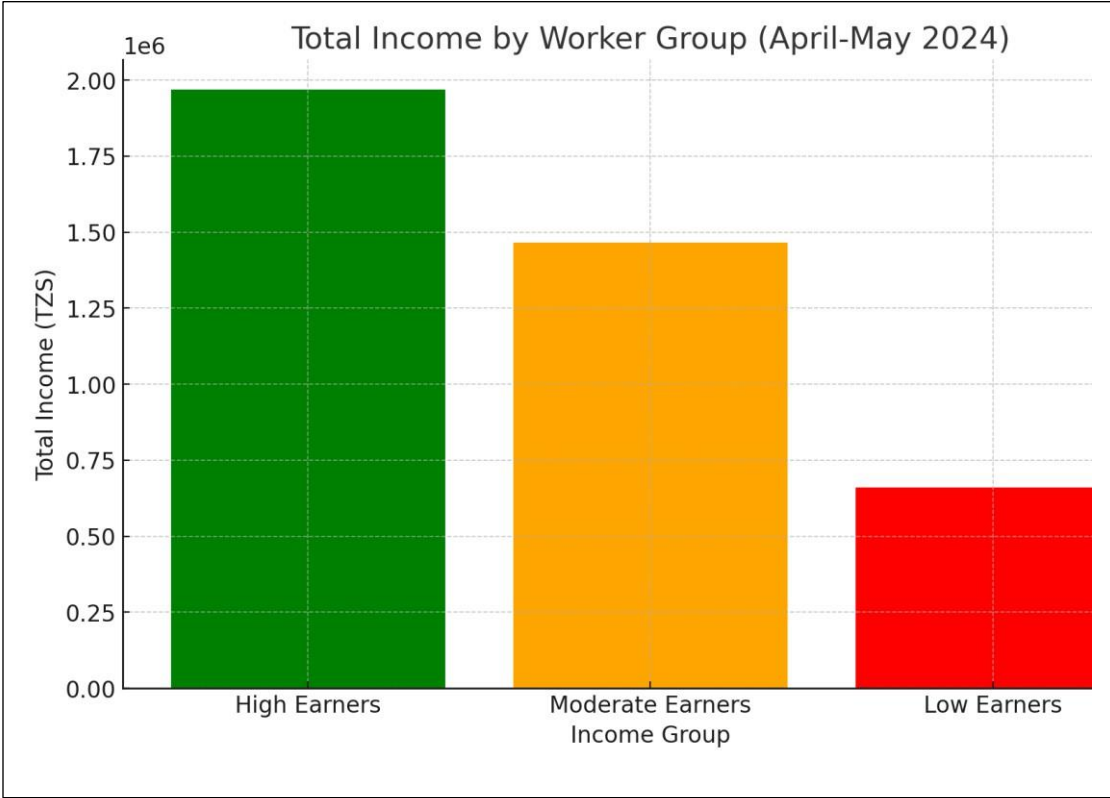


Figure 4.1: Total Income by Worker Group

The detailed analysis showed that income from regular salaries played a crucial role in stabilizing the financial position of workers. Those on casual labor contracts, earning around TZS 300,000 per month, had a more predictable income flow, whereas workers depending solely on day work or small businesses faced greater income instability. High earners managed daily incomes of TZS 64,000 to TZS 88,000, while low earners had daily incomes between TZS 25,000 and TZS 30,000, illustrating a stark difference in their ability to meet daily needs.

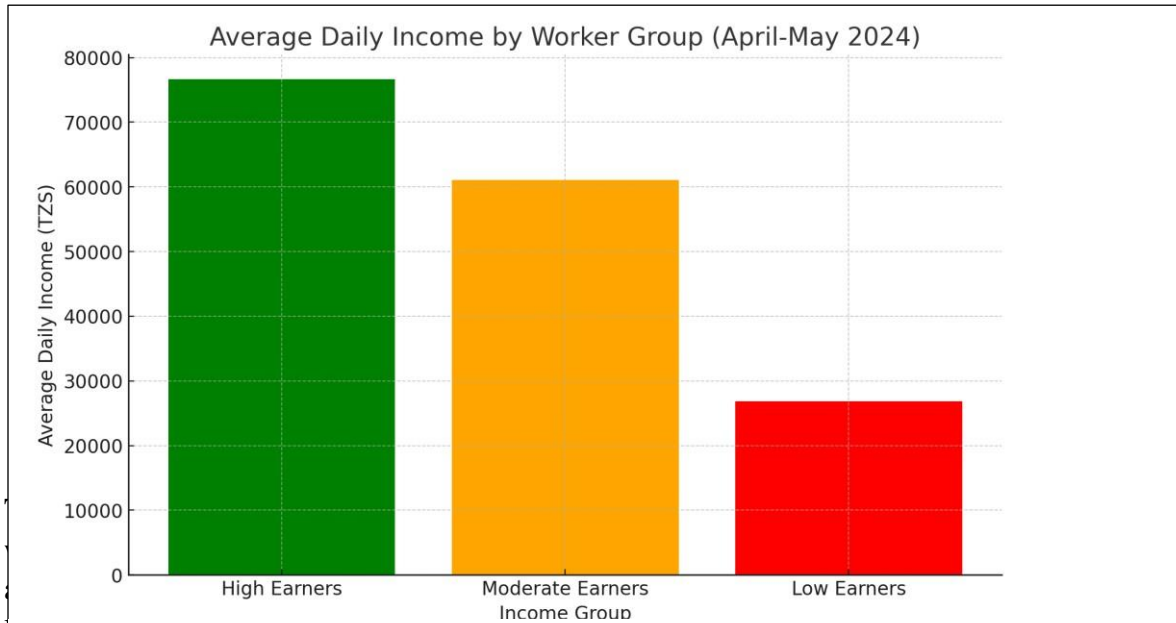
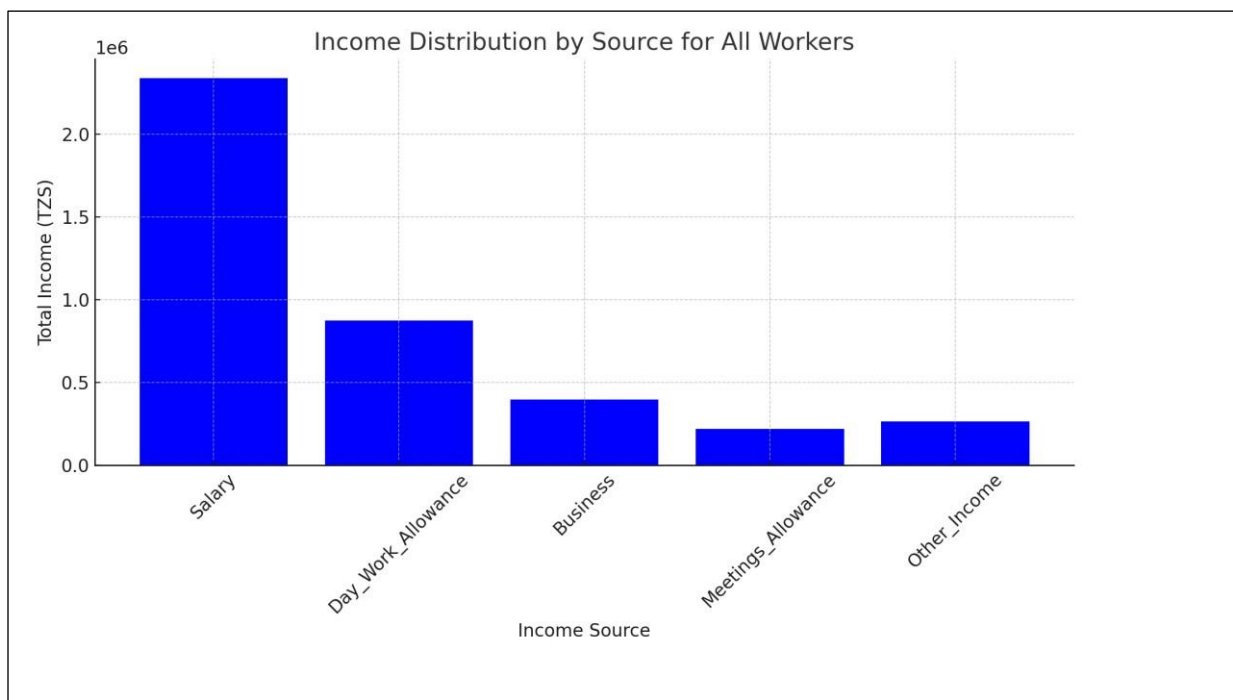


Figure 4.2: Average Daily Income by worker group

4.1.2 Income Distribution by Source

The findings further highlighted that salary was the most stable and significant source of income for sanitation workers, particularly for those in the high- and moderate-income groups. Workers with regular salaries, such as those on casual labor contracts earning TZS 300,000 per month, were better positioned to manage financial uncertainty. This stable income source provided a financial cushion, allowing these workers to consistently cover essential expenses. In contrast, those relying primarily on casual work allowances or small business activities faced more inconsistency in their earnings. While these additional income sources contributed to overall income, they were irregular and less predictable, exacerbating the financial instability of low earners. This variability in income from non-salary sources further underscored the vulnerability of workers who lacked a steady salary, making them more susceptible to financial insecurity during periods of reduced work opportunities.



It for such times i

4.1.3 Key Observations from Individual Income Analysis (April-May 2024)

The individual income analysis for sanitation workers during April and May 2024 revealed distinct income disparities based on the number and type of income streams. **High earners**, such as Worker 6 and Worker 2, benefited from diversified income sources, which provided them with greater financial stability. Worker 6 had a total income of 1,063,550 TZS, drawing from salary (600,000 TZS), business income (240,550 TZS), and other sources (200,000 TZS). Similarly, Worker 2 earned 905,000 TZS, supported by salary (540,000 TZS), business income (75,000 TZS), meeting allowances (150,000 TZS), and other income (65,000 TZS). These multiple income sources cushioned these workers from financial instability and allowed them to better manage expenses.

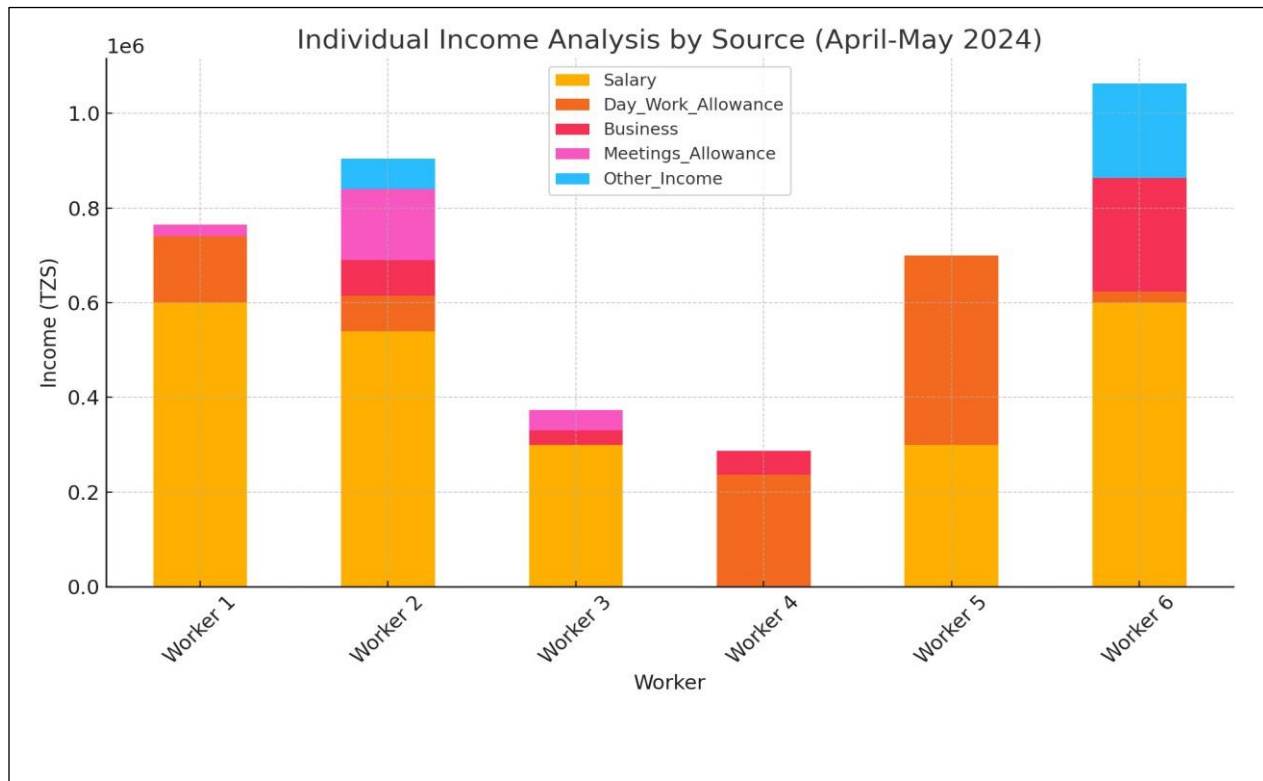


Figure 4.4: Individual income Analysis by Source

Moderate earners, such as Worker 1 and Worker 5, earned between 700,000 and 765,000 TZS, primarily relying on their salary and casual labor. Worker 1's total income of 765,000 TZS was largely from salary (600,000 TZS) and day work allowances (140,000 TZS), with smaller contributions from meeting allowances (25,000 TZS). Worker 5 earned 700,000 TZS, with significant day work allowances (400,000 TZS) complementing their salary of 300,000 TZS. However, these workers would benefit from further diversifying their income to improve financial resilience.

Low earners, like Worker 3 and Worker 4, had the lowest total incomes, earning 374,000 TZS and 287,000 TZS, respectively. Worker 3 relied on salary (300,000 TZS), business income (30,000 TZS), and meeting allowances (44,000 TZS). Worker 4, with no salary income, depended heavily

on casual work allowances (237,000 TZS) and small business income (50,000 TZS). Their heavy reliance on irregular income streams from casual work and small businesses made them more financially vulnerable compared to those with stable salary incomes. Overall, the analysis underscored the importance of income diversification in achieving financial stability, with high-income workers benefiting the most from multiple, reliable income sources.

4.1.4 Individual-Level Expense Analysis for Workers (April-May 2024)

The analysis of expenses for sanitation workers over the period of April to May 2024 revealed significant variation in spending patterns across individuals. The analysis categorized expenses into three main areas: essential living costs (food, transport, utilities), work-related costs, and emergency or education-related expenses. Below is a summary of key findings:

1. **Total Expenses Over Time** The total expenses for each worker over the two-month period varied widely. Workers like Worker 2 and Worker 4 reported significantly higher expenses compared to their income, resulting in deficits. For instance, Worker 2 had a total expenditure of 1,997,000 TZS but an income of only 905,000 TZS, leading to a substantial financial shortfall. Conversely, workers such as Worker 1, Worker 3, and Worker 6 maintained surpluses, as their expenses were lower than their incomes. Worker 1, for example, had expenses totaling 223,600 TZS against an income of 745,000 TZS, creating a financial surplus.

Table 4.1: Summary of total Expenses over Time

Worker	Total Expenses (TZS)	Total Income (TZS)	Surplus/Deficit
Worker 1	223,600	745,000	Surplus
Worker 2	1,997,000	905,000	Deficit
Worker 3	686,889	814,500	Surplus
Worker 4	1,185,000	397,000	Deficit
Worker 5	68,526	695,000	Surplus
Worker 6	79,800	1,134,550	Surplus

2. **Average Daily Expenses** The daily expense patterns highlighted significant differences in financial management across the workers. Worker 2, with an average daily expense of 33,283 TZS, far exceeded other workers, largely driven by high education-related costs. In contrast, Worker 5 and Worker 6 managed to keep their average daily expenses much lower, at 1,142 TZS and 1,329 TZS respectively, indicating better control over their daily spending.

Table 4.2: Summary of average Daily Expenses

Worker	Average Daily Expense (TZS)
Worker 1	3,727
Worker 2	33,283
Worker 3	11,448
Worker 4	20,987
Worker 5	1,142
Worker 6	1,329

3. **Expense Categorization** The breakdown of expenses into categories revealed that **essential living costs** (including food, transport, and utilities) consistently accounted for a significant portion of workers' expenses, ranging from 25% to 60% of total spending. Workers with children, such as Worker 2, had a much larger proportion of their expenses (68%) directed towards **emergency and education-related costs**, which included school fees and healthcare for their dependents. On the other hand, work-related expenses remained a minor portion of total expenses, highlighting that the bulk of financial strain stemmed from living costs and family obligations. Worker 3, for instance, allocated 60% of their expenses to essential living costs, while Worker 1 and Worker 5 faced greater pressure from education and healthcare needs, dedicating 51% and 70% of their expenditures to these categories, respectively.

Table 4.3: Summary of expense Categorization

Worker	Essential Living Costs (Food, Transport, Utilities)	Work-related	Emergency/Health/Child Education
Worker 1	31%	18%	51%
Worker 2	25%	7%	68%
Worker 3	60%	15%	25%
Worker 4	53%	10%	37%
Worker 5	30%	0%	70%
Worker 6	35%	5%	60%

These findings indicate that income alone is insufficient to gauge financial security, as personal and family obligations, particularly education and healthcare, are significant drivers of financial strain for workers.

4.1.5 Individual-Level Expense Analysis for Workers (April-May 2024)

4.1.5.1 Total Expenses and Surplus/Deficit Patterns

The analysis of workers' total expenses over the two-month period shows a clear division between those maintaining a surplus and those running a deficit. Workers 1, 3, 5, and 6 recorded a surplus, managing to spend less than their total income. These workers benefited from steady income sources, such as salary or business activities, allowing them to maintain a financial cushion. On the other hand, Workers 2 and 4 faced significant deficits due to high education and childcare expenses. Worker 2, for instance, had expenses amounting to 1,997,000 TZS against an income of only 905,000 TZS, driven primarily by educational costs. These deficits highlight the financial vulnerability of workers with high family-related expenses.

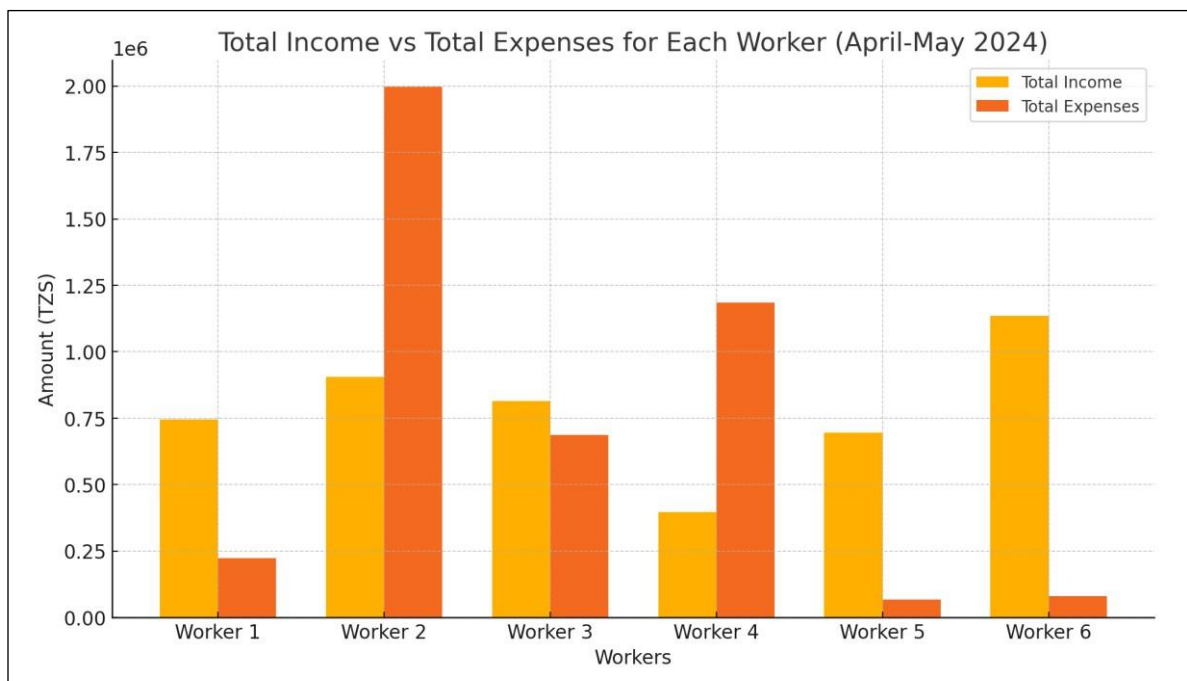


Figure 4.5: Total Income against Total Expenses for each Worker

4.1.5.2 Additional insights from KII interviews and FGDs

The interviews and focus group discussions confirmed the patterns seen in the financial diaries, with workers expressing deep concern over their financial instability. Many workers reported relying on high-interest loans to cover day-to-day expenses, which only deepened their financial challenges. One sanitation worker shared how the irregularity of income payments severely impacted their ability to manage personal finances:

"The regularity of income payments is highly unpredictable. This unpredictability stems from the nature of our job and the economic status of the communities we serve." (Indepth Interview, sanitation worker)

This financial volatility has profound consequences. In one case, a worker reported losing a plot of land because they were unable to repay a high-interest loan. This example highlights how

financial insecurity directly threatens the long-term economic stability and livelihoods of sanitation workers in Arusha.

The financial instability among sanitation workers is deeply connected to the broader socio-economic environment they operate in. The seasonal nature of sanitation work, combined with the limited financial capacity of their clients, results in income that is both irregular and insufficient. Moreover, the high-interest loans workers often rely on to manage cash flow only add to their economic difficulties, leading to long-term challenges such as asset loss and reduced financial security. The combination of these factors perpetuates a cycle of financial vulnerability, limiting workers' ability to build stable livelihoods.

4.2 Social Protection Gaps

4.2.1 Absence or Inadequacy of Social Security Schemes

The findings from Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs) revealed that sanitation workers in Arusha face significant gaps in social protection, particularly in accessing formal social security mechanisms such as health insurance and pensions. The majority of sanitation workers, especially those engaged in informal manual emptying work, have no access to health insurance or pension schemes, leaving them financially vulnerable when accidents or illnesses occur. As most workers pay medical expenses out of pocket, they often experience financial strain, compounding the already precarious nature of their work. Workers also face substantial barriers when trying to access loans or savings accounts due to the lack of necessary documentation and the high interest rates, making financial services largely inaccessible.

One sanitation worker shared the burden of lacking such safety nets:

“When we fall sick or get injured, we have to use our own money, which is hard to get because the job doesn’t give us regular income” (In-depth interview, sanitation worker).

4.2.2 Lack of Safety Nets and Financial Vulnerability

The lack of safety nets exacerbates the financial vulnerability of sanitation workers, who often struggle with irregular income and high financial responsibilities, such as education and medical expenses. The seasonal nature of their work, particularly in manual pit emptying, leads to long periods without consistent income. During the rainy season, demand for their services drops significantly, forcing workers to seek alternative low-paying, physically demanding jobs. These income fluctuations leave workers unprotected from financial shocks, such as medical emergencies or the need to take on high-interest loans.

A worker shared his experience of losing property due to financial instability:

"I took out a high-interest loan to pay for my children’s school fees, but I couldn’t keep up with the repayments, so I lost my plot of land” (In-depth interview, sanitation worker).

4.2.3 Impact of Stigmatization and Social Norms

Social stigma and negative community perceptions further compound the financial challenges faced by sanitation workers. Their work is often viewed as degrading, leading to discrimination, underpayment, and exploitation. The negative perceptions of sanitation work limit workers' ability to negotiate fair wages and secure consistent work, which only worsens their financial insecurity.

Workers reported being treated as "dirty" or "untrustworthy," making it even harder for them to gain community support or fair treatment in the labor market.

One worker expressed the impact of this stigma:

"People see us as people who have lost direction in life, and this affects how we are treated and how much we are paid" (FGD, sanitation worker).

These social protection gaps—coupled with the absence of formal benefits, financial vulnerability, and social stigmatization—create a cycle of poverty and insecurity that severely impacts the livelihoods and well-being of sanitation workers.

4.3 Limited Access to Financial Services

4.3.1 Challenges Faced by Workers in Accessing Formal Financial Resources

Sanitation workers in Arusha face considerable barriers when attempting to access formal financial services, such as loans or savings accounts. A key challenge is the lack of collateral, which financial institutions typically require for loans. Most sanitation workers do not own property or valuable assets, as many live in rented homes. This restricts their ability to secure the necessary loans to invest in their businesses or cover essential expenses like healthcare and education. Additionally, high-interest rates make it difficult for workers to repay loans, exacerbating their financial struggles.

Irregular employment further complicates access to financial services. Sanitation workers, particularly those engaged in manual emptying, experience unpredictable income patterns due to the seasonal nature of their work. During the rainy season, demand for their services peaks, but it declines sharply during the dry season, making their income highly variable. This inconsistency makes them ineligible for loans that require stable income, and financial institutions do not recognize their informal or contract-based employment.

"I took out a loan with a high-interest rate to pay for my children's school fees, but I lost my land because I couldn't keep up with the repayments," shared one worker during an in-depth interview.

4.3.2 Barriers to Accessing Financial Services

Several structural barriers limit the ability of sanitation workers to engage with formal financial services. One of the primary obstacles is the lack of documentation, including formal employment contracts and identification, which financial institutions typically require to open savings accounts or approve loans. Since many sanitation workers operate informally, they are often excluded from the financial system.

Mistrust in financial institutions also prevents workers from seeking loans or saving opportunities. Many workers have had negative experiences with banks, particularly regarding high-interest loans that led to asset loss. These experiences have fostered a deep reluctance to engage with formal financial services.

"I lost my property after taking out a high-interest loan that I couldn't repay," said one worker, expressing his mistrust and hesitation to engage with banks again.

Finally, low levels of financial literacy compound these challenges. Many sanitation workers lack an understanding of financial concepts, such as interest rates or loan repayment schedules, and are unaware of available financial products. This lack of knowledge often leads to poor financial decisions, which can trap workers in a cycle of debt and financial insecurity.

4.3.3 Coping Mechanisms and Informal Financial Practices

In the absence of access to formal financial services, sanitation workers rely on informal financial practices to manage their income and cope with financial challenges. Borrowing from friends and family is common during emergencies, as it bypasses the formal documentation and high-interest requirements of traditional loans. Many workers also engage in multiple jobs to stabilize their income, combining sanitation work with other activities such as selling charcoal or poultry farming. However, these jobs offer limited financial stability and do not address the underlying issues of financial insecurity.

Some workers participate in informal savings groups or rotating savings and credit associations (ROSCAs). These community-based initiatives provide an accessible way for workers to save small amounts regularly and access funds in times of need. While helpful, these savings groups are often insufficient to cover significant expenses, such as healthcare or house construction, leaving workers vulnerable to financial shocks.

Addressing these challenges will require targeted financial products and services designed to meet the unique needs of sanitation workers, alongside financial literacy programs to improve their understanding of the financial system.

4.4 Impact on Livelihoods and Dignity of Sanitation Workers

4.4.1 Impact on Livelihoods: Affordability of Basic Needs

The financial insecurity faced by sanitation workers significantly affects their ability to afford essential needs such as housing, healthcare, education, and food. Irregular income, exacerbated by the seasonality of sanitation work, leaves workers struggling to meet their basic living expenses.

a) Housing Instability

The erratic nature of income makes it challenging for sanitation workers to secure stable housing. Many rely on rental accommodation and frequently face the risk of eviction due to delayed rent payments. In some cases, workers have lost personal belongings when landlords sold off their items to recover unpaid rent.

"I lost all my belongings when my landlord sold them off because I couldn't pay rent on time," reported one worker during an interview.

Some workers who own plots of land and have started constructing homes struggle to complete these projects due to financial instability, forcing them to remain in costly rental housing.

b) Healthcare Access

Most sanitation workers lack health insurance, leaving them vulnerable to out-of-pocket medical

expenses. These unexpected costs, often arising from work-related injuries or illnesses, exacerbate financial strain.

"When my wife went into labor, I had no savings or insurance to cover the medical costs. I had to work continuously just to manage the expenses," shared a worker, highlighting the burden of medical costs.

Due to the hazardous nature of sanitation work, frequent exposure to health risks worsens their financial insecurity, as medical emergencies become common.

c) Education of Children

Financial insecurity also affects workers' ability to afford education for their children. Many sanitation workers struggle to pay school fees, which often forces them to resort to high-interest loans. These loans lead to further financial hardship when workers are unable to repay them, sometimes resulting in the loss of personal assets, such as land.

"I had to take a loan to pay for my children's school, but I lost my land because I couldn't keep up with the repayments," a worker explained.

To cover education costs, many workers sacrifice other essential needs, such as food and clothing, further affecting their families' quality of life.

d) Food Security

Inconsistent income also leads to food insecurity for sanitation workers and their families. Many reported struggling to afford sufficient food, with some admitting they go without meals or reduce the frequency of their meals to save money.

"Sometimes we can only afford to eat once a day," noted a worker, while another mentioned his family often goes to bed hungry due to financial constraints.

4.4.2 Impact on Dignity and Social Recognition

Financial instability not only affects the basic livelihoods of sanitation workers but also undermines their dignity and social standing. The stigma attached to their work exacerbates their exclusion from the broader community.

a) Stigmatization and Social Exclusion

Sanitation workers, especially manual emptiers, face social stigmatization and are often seen as "dirty" and "low-class" because of the nature of their work. This perception leads to discrimination and further marginalization.

"People in the community see us as people who have lost direction in life. We are looked down upon and often accused of theft just because of our work," explained one worker during a focus group discussion.

The negative social norms surrounding sanitation work also result in low wages and lack of respect, reinforcing their financial and social vulnerability.

b) Loss of Personal Dignity

Due to the negative perceptions from the community, many sanitation workers internalize the

stigma, leading to a loss of self-esteem and dignity. Workers often feel ashamed of their jobs, even though their work is crucial for public health.

"Some workers are afraid to be seen doing their jobs because they fear judgment from others," a worker noted, illustrating the deep sense of shame many experience.

The lack of proper uniforms and protective equipment further diminishes their dignity, as they often appear disheveled and unkempt while performing their duties.

c) Invisibility in the Formal Economy

Most sanitation workers operate in informal settings, which means they are not formally recognized within the sanitation sector. This invisibility denies them access to critical benefits such as health insurance, pensions, or financial support, further entrenching their financial insecurity.

"We want to be formally recognized so we can access benefits like health insurance and financial support," expressed one worker, emphasizing the need for formal recognition by local authorities.

4.4.3 Coping Mechanisms and Strategies to Restore Dignity

Despite the challenges, sanitation workers in Arusha employ various coping mechanisms to mitigate financial insecurity and address the stigma attached to their work.

a) Diversification of Income Sources

Many workers take on additional jobs, such as selling vegetables or running small businesses, to supplement their income from sanitation work. Although these efforts help, they often fail to fully resolve the workers' financial challenges.

b) Community Support and Informal Networks

Workers frequently rely on family and friends for financial support during emergencies. This informal safety net provides temporary relief but does not address long-term financial insecurity.

c) Seeking Formal Recognition and Professionalization

Sanitation workers are increasingly advocating for formal recognition by local authorities. They believe that being recognized as professional sanitation workers, provided with training, and given proper safety gear would improve their working conditions and restore their dignity.

4.5 Root Causes of Financial Insecurity Among Sanitation Workers

4.5.1 Systemic Factors

The financial insecurity of sanitation workers in Arusha is deeply rooted in systemic issues related to the informal nature of their work and the broader economic and social structures that marginalize manual emptiers. Data from Key Informant Interviews (KIIs), Focus Group Discussions (FGDs), and Financial Diaries illustrate how these systemic factors contribute to their financial vulnerability.

a) Informal Nature of Manual Emptying Work

Manual emptying remains largely informal, leaving workers without formal contracts, job security, or access to social protections. Without formal recognition, sanitation workers do not have the legal standing required to access financial services, social security, or health benefits. This exclusion forces them into unstable and low-paying work, with unpredictable income tied to fluctuating demand.

"Most of us have no formal employer, and we rely on inconsistent demand for our services. Our income depends on emergencies and the rainy season when there is more need for pit emptying," shared one worker during a focus group discussion.

This lack of formal contracts excludes workers from social safety nets, such as pensions and health insurance, exacerbating their financial insecurity.

b) Criminalization and Marginalization of Manual Emptying

Historically, manual emptying has been stigmatized and, at times, criminalized in Arusha, pushing workers further into the margins of society. Although they provide essential services, manual emptiers often face legal risks, social stigma, and police harassment. The criminalization of their work prevents them from operating openly and accessing legal protections or fair compensation.

"Manual emptying is still seen as illegal in some areas, and we are sometimes harassed or fined by the police," reported a worker in one of the interviews.

This marginalization not only undermines their ability to earn a stable income but also limits opportunities for professionalization and upward mobility within the sanitation sector.

c) Lack of Access to Capital and Financial Services

Sanitation workers, particularly manual emptiers, struggle to access formal financial services due to their informal employment status. Without documentation such as employment contracts or proof of stable income, they are unable to secure loans or open savings accounts.

"We don't have formal jobs, so banks won't give us loans. We end up borrowing from local lenders at high interest rates, which makes our financial situation worse," one respondent shared.

As a result, many workers rely on informal lenders, who charge high interest rates, further entrenching them in debt. This lack of access to affordable financial tools limits their ability to invest in business growth or save for future financial needs.

d) Seasonal and Unstable Demand

The demand for manual emptying services is highly seasonal, driven by periods of heavy rainfall that cause toilets to fill more quickly. Workers experience income surges during the rainy season, followed by long periods of little or no work during the dry season.

"In the rainy season, there is a lot of work, but during the dry season, there's nothing. We don't know what to do during those times," explained one worker.

This income variability prevents workers from saving or planning for the future, leaving them financially vulnerable during periods of low demand.

4.5.2 Historical and Structural Factors Contributing to Financial Insecurity

Several historical and structural factors further exacerbate the financial insecurity faced by sanitation workers. These include social stigmas, policy gaps, and inadequate support from local authorities.

a) Social Stigma and Marginalization

Sanitation workers are often perceived as being socially marginalized due to the nature of their work. This stigma, deeply rooted in cultural and historical biases, limits their ability to negotiate fair wages or secure consistent employment. The perception that sanitation work is "dirty" and only for the impoverished reinforces low wages and poor working conditions.

"People think this work is only for those who have no other options. We're looked down on and paid less because they see us as less valuable," shared one worker during an interview.

The stigma associated with sanitation work not only diminishes the workers' self-esteem but also hinders efforts to formalize the sector and improve their financial stability.

b) Policy Gaps and Weak Enforcement of Regulations

While there are national guidelines and policies aimed at protecting sanitation workers, such as those from the Energy and Water Utilities Regulatory Authority (EWURA) and Occupational Health and Safety (OHS) standards, these regulations are poorly enforced. In particular, manual emptiers working informally often operate without basic safety measures, such as Personal Protective Equipment (PPE), increasing their health risks and associated financial burdens.

"There are policies that say we should have PPE, but in practice, we don't get it. The government doesn't follow up, so we have to work without protection," noted one worker.

According to the Occupational Health and Safety Act (2003) and EWURA guidelines (2020), employers and sanitation service providers are responsible for ensuring workers have the necessary PPE. However, in practice, many sanitation workers—especially those working informally—lack access to proper protective gear due to financial constraints, inconsistent supply, or limited regulatory oversight. While formal sanitation workers may receive PPE from their employers, informal workers must often purchase it themselves, which is a challenge given their precarious financial situations.

This lack of enforcement exacerbates the financial insecurity of sanitation workers, who are frequently forced to bear the costs of medical treatment for work-related injuries or illnesses. Strengthening enforcement mechanisms and creating support systems, particularly for informal workers, is crucial to improving occupational safety and financial stability within the sector..

4.5.3 Insights from Stakeholder Interviews: Local Authorities and Regulations

Stakeholder interviews provided additional insights into how local authorities and existing regulations perpetuate financial instability for sanitation workers.

a) Inadequate Formal Recognition of Manual Emptiers

Local authorities often prioritize formal sanitation systems, such as sewer networks and mechanical emptying, leaving manual emptiers without formal recognition or support. This lack of formal inclusion prevents workers from accessing basic protections, such as minimum wage laws or health benefits.

"Manual emptiers are not recognized like other sanitation workers, so they don't have the same rights or benefits. They are left out," explained a local government official.

Without formal recognition, manual emptiers remain trapped in precarious work conditions, with little opportunity for economic advancement.

b) Lack of Financial Inclusion

Many sanitation workers lack access to formal banking systems and financial inclusion due to their informal employment status. Banks and financial institutions often require formal job documentation, which most workers cannot provide, leaving them reliant on informal lending systems that exacerbate their financial challenges.

c) Limited Capacity of Local Authorities

Local authorities often lack the capacity and resources to effectively enforce existing regulations or provide financial support to sanitation workers. This gap in oversight leaves workers vulnerable to exploitation and financial instability.

"Local authorities are overstretched and don't have the resources to support manual emptiers properly," commented one sanitation coordinator.

4.5.4 Broader Economic and Social Structures

The broader economic context also plays a critical role in shaping the financial insecurity of sanitation workers.

a) Economic Vulnerability of Low-Income Communities

Sanitation workers primarily serve low-income communities, where clients struggle to afford even basic services. This economic constraint forces workers to accept lower fees, further diminishing their earning potential.

b) Absence of Financial Literacy and Training

Many sanitation workers lack the financial literacy needed to manage their income effectively, plan for the future, or access better financial opportunities. The absence of financial education programs limits their ability to escape the cycle of poverty and financial insecurity.

4.6 Innovative Solutions and Interventions for Financial Security

The findings from Key Informant Interviews (KIIs), Focus Group Discussions (FGDs), and Financial Diaries highlight several innovative solutions and interventions aimed at improving the financial security of sanitation workers in Arusha. These solutions draw from global best practices, worker-driven proposals, and an analysis of their feasibility and scalability in the local context.

4.6.1 Global Best Practices

Global examples of successful interventions for informal workers, including cooperative models, micro-financing schemes, and government-led initiatives, offer valuable insights for addressing financial insecurity among sanitation workers in Arusha.

a) Cooperative Models

Cooperative models have proven effective in empowering informal workers by pooling resources, providing collective bargaining power, and enabling access to financial services.

Case Study: SWaCH Cooperative, Pune, India

The SWaCH cooperative in Pune, India, empowered waste pickers through formalization and

cooperative structures. By pooling resources and collectively negotiating with local authorities, workers achieved more stable incomes and gained access to social protections like health insurance and pensions.

Application to Arusha: A similar cooperative model could be implemented for sanitation workers in Arusha. By forming cooperatives, manual emptiers could collectively negotiate better wages, pool savings, and access group microloans to expand their services and invest in protective equipment or tools. Such formalization would also improve workers' social recognition and financial stability.

b) Micro-financing Schemes

Micro-financing initiatives tailored to the needs of low-income and informal workers can provide access to capital for business expansion or managing financial emergencies.

Case Study: Grameen Bank, Bangladesh

Grameen Bank in Bangladesh pioneered micro-loans for impoverished communities, offering small, collateral-free loans to low-income individuals. This model helped workers improve their financial security by offering affordable loans and building financial literacy.

Application to Arusha: Implementing a micro-finance model targeting sanitation workers could help them secure the capital needed to expand their operations, purchase necessary equipment, and stabilize their income during off-peak periods.

c) Government-Led Initiatives

Several countries have introduced government-led programs to provide social protections, including health insurance and pensions, for informal workers.

Case Study: National Pension Scheme for Informal Workers, India

India's National Pension Scheme allows informal workers to contribute a portion of their income to a pension fund, which is matched by the government. This initiative provides long-term financial security for workers without formal employment contracts.

Case Study: Shasthya Niramoy Health Insurance Scheme, Bangladesh

Bangladesh introduced the **Shasthya Niramoy** scheme, which provides affordable health insurance for low-income workers, including sanitation workers. This initiative, supported by local government and NGOs, ensures that workers can access medical services at reduced costs, preventing financial strain from work-related injuries or illnesses.

Application to Arusha:

A similar government-led scheme could be piloted in Arusha, enabling sanitation workers to contribute to health insurance or pension funds, with matching contributions from the government or local authorities. Additionally, an insurance model similar to **Shasthya Niramoy** could be explored, where sanitation workers receive subsidized or community-based health coverage to reduce financial burdens arising from occupational hazards. Partnerships

with micro-insurance providers or municipal health programs could also help improve financial resilience and access to medical care.

.

4.6.2 Worker-Driven Proposals

The sanitation workers themselves proposed several innovative solutions during FGDs and KIIs, highlighting their agency in shaping the interventions that would best address their financial insecurity. These worker-driven solutions include cooperative savings groups, access to microloans, and partnerships with local financial institutions.

a) Cooperative Savings Groups

Sanitation workers expressed a strong interest in forming cooperative savings groups, where members could pool their savings and access collective loans.

Proposal: Workers suggested establishing a group savings mechanism similar to rotating savings and credit associations (ROSCAs), where each member contributes regularly, and funds are distributed in turn. This model would help workers save for emergencies, such as medical costs or school fees, and create a collective fund for investing in business expansion.

Testimonial: One worker noted that pooling resources through a cooperative model would increase trust and foster a sense of unity within the group, making it easier to manage finances and access collective benefits.

b) Access to Microloans

Workers consistently highlighted the need for access to small, affordable loans to cover financial shortfalls or invest in their businesses. Current barriers, such as lack of documentation and collateral, make it difficult for workers to secure formal loans.

Proposal: Workers proposed forming partnerships with microfinance institutions or community-based lenders to offer low-interest loans with flexible repayment terms. These loans could be used to purchase better tools, transportation, or protective equipment.

Testimonial: A sanitation worker shared that access to microloans would relieve the financial pressure of paying for children's school fees or expanding small businesses, significantly improving their financial resilience.

c) Partnerships with Local Financial Institutions

Sanitation workers saw the need for partnerships with local banks or Savings and Credit Cooperative Societies (SACCOs) to offer tailored financial products and improve financial literacy.

Proposal: Workers suggested establishing partnerships with SACCOs to offer customized savings products and microloans. These partnerships would also include financial literacy training to help workers manage their income, save for the future, and avoid high-interest debt.

Testimonial: One worker emphasized that having access to tailored financial products, such as low-interest loans, would encourage sanitation workers to participate in formal banking systems, improving their long-term financial security.

4.6.3 Feasibility and Scalability

In assessing the feasibility and scalability of these solutions in the Arusha context, several factors, including local challenges, infrastructure capacity, and cultural acceptance, were considered.

a) Feasibility of Cooperative Models

Challenges: Trust issues among workers and a lack of organizational capacity could hinder the success of cooperative models. Mismanagement of pooled resources has been a common issue in informal savings groups, which could undermine the potential benefits of cooperatives.

Feasibility: With proper training in financial management and cooperative governance, and support from local authorities, the cooperative model could succeed in Arusha. Workers showed strong interest in cooperative structures, indicating readiness for this type of intervention.

b) Feasibility of Micro-Financing and Savings Schemes

Challenges: Sanitation workers face significant barriers to accessing formal financial services due to their informal employment status and low creditworthiness. Additionally, there is widespread mistrust of financial institutions, which could limit participation.

Feasibility: Local microfinance institutions and SACCOs could be incentivized to develop customized financial products for sanitation workers. Partnerships with development organizations or NGOs could subsidize the cost of loans and increase trust in formal financial institutions.

c) Scalability of Government-Led Interventions

Challenges: The local government in Arusha faces resource constraints, which may limit the scalability of government-led interventions. Furthermore, enforcement of regulations and policies for informal workers has been inconsistent, which could affect the success of such programs.

Feasibility: A pilot program focusing on specific neighborhoods or communities in Arusha could test the scalability of government-led interventions. By formalizing manual emptiers' work and providing access to social protections, the program could be expanded gradually.

d) Scalability of Worker-Driven Initiatives

Challenges: The informality of sanitation workers' employment and the lack of coordination among groups could pose challenges to scaling worker-driven initiatives. Without external support, collective savings models may collapse due to internal conflicts or mismanagement.

Feasibility: With training in financial management and cooperative governance, and support from NGOs or development partners, worker-driven initiatives could be scaled across multiple groups. The strong interest in forming savings groups and accessing microloans indicates the potential for these models to be replicated across Arusha.

4.6.4 Recommendations for Tailoring Interventions to Arusha

Based on the feasibility and scalability analysis, the following recommendations can be made to tailor interventions to the specific needs of sanitation workers in Arusha:

a) Formalize Cooperative Models

Facilitate the formal registration of sanitation worker cooperatives to provide workers with access to social security, health insurance, and financial services. This process could be supported by local government authorities and financial institutions.

b) Establish Micro-Finance Partnerships

Develop partnerships between sanitation worker cooperatives and local microfinance institutions or SACCOs. These institutions could offer low-interest microloans and financial literacy programs tailored to the needs of informal workers.

5 Discussion

The findings of this study offer a detailed understanding of the financial insecurity experienced by sanitation workers in Arusha and provide insights into potential interventions to improve their economic stability. This discussion interprets the key findings in relation to existing literature and highlights the implications for sanitation workers' well-being, advocacy, and future research.

5.1 Interpretation of Key Findings in Relation to Existing Literature

The study's findings align with broader literature on the challenges faced by informal workers in developing economies, particularly in sectors such as sanitation where work is often stigmatized, informal, and precarious. Scholars like Chen, (2012) have documented how informal employment leaves workers without access to social protections, regular income, and financial services. This study reinforces these findings by showing that sanitation workers in Arusha, particularly manual emptiers, suffer from similar economic vulnerabilities. The irregular and unpredictable nature of their income, exacerbated by seasonal demand fluctuations, places them in a financially precarious position, similar to findings in other low-income labor sectors (Devereux and Sabates-Wheeler, 2004).

The study also supports the literature on the role of social stigma in deepening the economic insecurity of marginalized workers. Research by Hutton and Chase (2016) notes how stigma around sanitation work not only affects workers' social standing but also limits their economic opportunities. This study confirms these effects in the Arusha context, where sanitation workers, particularly manual emptiers, face social exclusion, underpayment, and limited access to financial resources due to the negative perceptions of their work.

In terms of financial strategies, the reliance on informal lending mechanisms and high-interest loans by sanitation workers in Arusha reflects broader trends identified in studies on financial inclusion in the Global South (Demirguc-Kunt et al., 2018). This study found that workers often resort to informal financial practices because they are excluded from formal financial systems due to their lack of collateral, stable income, or formal employment contracts. Similar findings have been reported in studies on microfinance and financial inclusion for informal workers in other low-income contexts (Banerjee et al., 2015).

5.2 Implications for Sanitation Workers' Well-being

The financial insecurity faced by sanitation workers in Arusha has far-reaching implications for their well-being. The inability to secure stable income sources and the heavy reliance on irregular, informal employment makes it difficult for workers to meet their basic needs, such as housing, healthcare, education, and food. This study found that many workers struggle to pay for essential expenses, leading to food insecurity, housing instability, and difficulties in affording healthcare and education for their families. These findings mirror global evidence that highlights the connection between informal work, poverty, and poor health outcomes (Lund and Srinivas, 2000).

Moreover, the social stigma attached to sanitation work contributes to a loss of dignity and exacerbates workers' economic insecurity. The negative perceptions held by the community further marginalize workers, limiting their ability to negotiate fair wages or secure consistent work. The lack of formal recognition and social protection, coupled with the exclusion from formal financial

services, creates a cycle of poverty that entrenches workers' vulnerability. The psychological impacts of this marginalization—such as shame, social exclusion, and low self-esteem—are well-documented in other studies on informal workers in stigmatized professions (Sahoo, 2020).

5.3 Implications for Advocacy and Future Research

The findings of this study have significant implications for advocacy efforts aimed at improving the conditions of sanitation workers in Arusha. Advocacy should focus on promoting the formalization of manual emptiers, enabling them to access social protection schemes such as health insurance and pensions, as well as formal financial services. Formalizing these workers' employment through the creation of cooperatives or government-supported initiatives could help mitigate many of the financial risks they face, providing them with more stable income sources, better working conditions, and access to financial services.

Additionally, advocacy efforts should focus on addressing the social stigma associated with sanitation work. Public awareness campaigns that emphasize the critical role of sanitation workers in maintaining public health and environmental hygiene can help shift societal perceptions. Successful initiatives, such as the ¹Mazingira Safi Maisha Bora campaign in Tanzania, the ²Safai Karmachari Andolan (SKA) in India, and the "I Support My Sanitation Worker" campaign in Ghana, have demonstrated the potential of community engagement, media outreach, and policy advocacy in improving the recognition and social status of sanitation workers. Implementing similar but contextualized awareness initiatives in Arusha and beyond could foster greater respect for sanitation workers, enhance their economic opportunities, and promote safer working conditions.

Future research should focus on evaluating the long-term impact of various financial inclusion strategies, such as micro-financing and cooperative models, in improving the financial security of sanitation workers. Pilot programs, like the cooperative savings models or microloan partnerships suggested by the workers themselves, could be implemented and studied to assess their effectiveness and scalability. Moreover, research that further explores the intersection of social stigma, informal employment, and financial insecurity in sanitation work across different regions could provide comparative insights to inform policy and practice in other contexts.

5.4 Conclusion

This study has provided a comprehensive analysis of the financial insecurity faced by sanitation workers in Arusha, revealing the systemic and structural barriers that exacerbate their economic vulnerability. The findings highlight the urgent need for formalization, social protection, and access to financial services for these workers. Addressing the underlying issues of income instability, social stigma, and exclusion from financial systems will be critical for improving their livelihoods and dignity. Through a combination of worker-driven proposals, global best practices, and targeted advocacy, it is possible to create a more financially secure and dignified future for sanitation workers in Arusha.

¹ The Mazingira Safi Maisha Bora (Clean Environment, Better Life) campaign is an initiative led by SNV Netherlands Development Organisation in Tanzania, aiming to promote safe sanitation behaviors to enhance public health and environmental cleanliness

² **Safai Karmachari Andolan (SKA), India:** A nationwide movement dedicated to eradicating manual scavenging and advocating for the rights and dignity of sanitation workers. [Safai Karmachari Andolan Official Website](#)

6 Recommendations

This section outlines evidence-based and actionable recommendations that address the financial insecurity of sanitation workers in Arusha, incorporating insights from Key Informant Interviews (KIIs), Focus Group Discussions (FGDs), and Financial Diaries.

6.1 Policy Recommendations

To address systemic issues and enhance the financial security of sanitation workers, the following policy recommendations are proposed:

a) Formalization of Sanitation Workers

*Recommendation: **Government to*** Implement policies that formalize manual sanitation workers, particularly manual emptiers, under Tanzania’s labor laws, providing them with access to social security, healthcare, pensions, and other worker benefits.

Justification: Findings revealed that informal employment leaves sanitation workers vulnerable to exploitation, without access to formal social protections. Formal recognition can provide workers with legal rights and access to benefits, leading to more stable livelihoods.

Additionally, formalization is closely linked to safer sanitation systems, as it ensures that workers are trained in best practices, adhere to safety standards, and operate within a regulated framework. By integrating manual emptiers into structured sanitation services, authorities can improve waste management, promote safer sludge disposal, and reduce environmental contamination. This approach not only protects workers but also enhances overall public health and sanitation infrastructure.

b) Enforcement of Occupational Health and Safety (OHS) Standards *Recommendation:*

LGAs and MoH to strengthen enforcement of existing OHS standards to ensure sanitation workers receive adequate Personal Protective Equipment (PPE) and training on safety protocols.

Justification: The absence of OHS measures significantly increases workers’ exposure to health risks, resulting in financial strain due to medical expenses. Stronger enforcement of OHS standards can mitigate these risks and lower healthcare costs.

c) Establish Financial Inclusion Programs for Informal Workers

Recommendation: Develop government programs aimed at improving financial inclusion for informal workers, offering access to microloans, savings accounts, and financial literacy training.

Justification: Many sanitation workers lack access to formal financial services, as they are considered high-risk borrowers. Tailored financial inclusion programs would empower them to manage income fluctuations more effectively.

d) Subsidized Health Insurance for Informal Workers

Recommendation: Government to establish a subsidized health insurance scheme for informal sanitation workers, modeled after successful global initiatives. This scheme should be a multi-stakeholder effort, with financial contributions shared among workers, the government, and other partners, ensuring sustainability and accessibility.

Justification: Sanitation workers, particularly those in the informal sector, face significant financial strain due to health emergencies, often lacking access to affordable medical care. Without a structured health insurance scheme, many resort to out-of-pocket payments, which

can push them further into financial insecurity. Learning from successful examples such as Ghana's National Health Insurance Scheme (NHIS) and Ethiopia's Community-Based Health Insurance (CBHI), a similar approach could be adapted for Tanzania's sanitation workforce.

Development partners, such as ³USAID and the ⁴World Bank, have supported such programs in other countries, providing funding, technical assistance, and implementation support to strengthen national health financing frameworks. In Ghana, USAID has funded capacity-building initiatives within NHIS, while in Ethiopia, donor-backed ⁵CBHI programs have significantly expanded healthcare access for informal workers. A comparable partnership-driven model in Tanzania could help integrate sanitation workers into an affordable health insurance system, reducing their financial vulnerability and improving access to quality healthcare.

6.2 Practical Solutions

In addition to policy changes, immediate practical interventions for the Arusha Depot group and other sanitation worker organizations are necessary:

a) Establish Cooperative Savings Groups

Recommendation: Form cooperative savings groups among sanitation workers to pool financial resources, build savings, and offer collective loans.

Justification: Workers frequently mentioned the need for savings mechanisms. Cooperative savings groups can provide a financial safety net, enabling workers to manage emergencies and invest in their business operations.

b) Develop Partnerships with Local Microfinance Institutions

Recommendation: Facilitate partnerships between sanitation worker cooperatives and local microfinance institutions (MFIs) to provide accessible microloans with low-interest rates.

Justification: Workers struggle to access traditional loans due to a lack of collateral. Partnerships with MFIs will give workers access to financial resources to improve their business operations and smooth income variability.

c) Implement Marketing and Promotion Strategies

Recommendation: Develop marketing strategies to raise awareness about the professionalism and essential services provided by sanitation workers, targeting both low- and middle-income communities.

Justification: Negative perceptions of sanitation work diminish demand. An effective marketing strategy will help workers attract more clients and combat stigma, boosting their income.

d) Integrate Sanitation Work with Other Business Opportunities

³ USAID has collaborated with the Ethiopian government to test and scale up CBHI schemes.

⁴ The World Bank has supported Ghana's Ministry of Health and NHIA through grants, technical assistance, and concessional loans, aiding in the implementation and sustainability of the NHIS.

Recommendation: Encourage sanitation workers to diversify their income by integrating their services with other business opportunities, such as recycling, waste-to-energy initiatives, or selling PPE.

Examples of successful models include: ⁶Recycling cooperatives that collect, sort, and sell recyclable materials.

⁷Waste-to-energy projects that generate biogas and organic fertilizers from sludge and organic waste.

Justification: Diversification would mitigate the seasonal income variability experienced by workers and offer additional income streams during off-peak periods.

e) Adopt the Urban Poor Federation Savings Model

Recommendation: Implement the Urban Poor Federation savings model, where workers create communal funds that can be leveraged to negotiate better financial terms with institutions or to access lower-interest loans.

Justification: This model has shown success in other contexts by providing collective financial stability and enabling workers to access better credit options.

6.3 Capacity Building

To ensure long-term success and sustainability, capacity-building initiatives are essential for sanitation workers to enhance their skills, access financial services, and gain social protection:

a) Financial Literacy Training

Recommendation: Provide training on budgeting, savings, investment, and debt management, in collaboration with local NGOs, microfinance institutions, and financial education programs.

Key Stakeholders Responsible:

Financial Institutions (e.g., NMB, CRDB): Deliver financial literacy workshops and support savings and credit programs for sanitation workers.

NGOs & Development Partners (e.g., SNV, Swisscontact, BRAC, Water Aid Tz): Fund and facilitate training sessions targeted at informal workers.

Local Government Authorities (LGAs) & Ministry of Health/Finance: Develop customized financial inclusion programs for sanitation workers.

Justification: Many workers struggle with irregular income management and lack access to formal financial education. Training on financial planning, debt management, and investment strategies will equip them with the skills needed to stabilize their income and avoid financial distress.

b) Skills Development for Income Diversification

⁶ Taka ni Mali was implemented by Swisscontact in Morogoro and Mwanza Municipalities, Tanzania and was funded by the Swiss Agency for Development and Cooperation (SDC), the Puma Energy Foundation and the Republic and Canton of Geneva.

⁷ Mr. Millinga's DEWATS in Dar es Salaam

Recommendation: Offer training in alternative income-generating activities such as poultry farming, waste recycling, or small business operations.

Key Stakeholders Responsible:

Vocational Training Centers (e.g., SIDO and VETA Tanzania): Provide technical training on alternative income-generating activities.

Private Sector & Cooperatives: Partner with sanitation workers to support waste-to-value enterprises (e.g., recycling, composting, waste-to-energy businesses).

Development Organizations (e.g., BORDA, SNV, UN-Habitat): Implemented pilot projects supporting income diversification in the sanitation sector that could be capitalized.

Justification: Many sanitation workers lack skills beyond manual sanitation work, making them financially vulnerable during off-peak periods. Training in small business operations, urban farming, and waste recycling will reduce dependency on sanitation work and enhance income stability.

c) Leadership and Advocacy Training

Recommendation: Train workers in leadership, negotiation, and advocacy skills to empower them to engage with local authorities and negotiate for better working conditions.

Key Stakeholders Responsible:

In formal Labor Unions & Advocacy Groups (⁸MATOPAS): Provide advocacy training and organize sanitation workers into self-representing groups.

Human Rights & Legal Aid NGOs (e.g., Legal and Human Rights Centre - LHRC): Offer legal education and negotiation skills training to sanitation workers.

Local Government Authorities (e.g., Municipal & Ward Offices): Facilitate dialogue between sanitation workers and policy-makers to improve labor protections.

Justification: Workers need collective bargaining power to advocate for their rights, fair wages, and better working conditions. Equipping them with advocacy skills will strengthen their ability to engage in policy discussions and demand better protections.

d) Knowledge Exchange and Study Tours

Recommendation: Organize knowledge exchange programs or study tours for sanitation workers to learn from successful models in other regions.

Justification: Exposure to best practices from successful sanitation cooperatives and waste-to-value projects will inspire innovation and provide new ideas to address local challenges.

e) Acquire Land for Decentralized Wastewater Treatment Systems (DEWATS)

Recommendation: Secure land to establish DEWATS, focusing on a waste-to-value approach that closes the sanitation loop and creates economic opportunities through resource recovery.

⁸ Sanitation workers umbrella organization in Tanzania.

Justification: DEWATS can help create sustainable employment opportunities for sanitation workers by turning waste into valuable products like compost and biogas, thereby increasing income and reducing environmental impact.

f) Strengthen Worker Associations

Recommendation: Encourage the formation and strengthening of worker associations to collectively advocate for improved working conditions, financial inclusion, and access to social protections.

Justification: Collective bargaining and formalized worker associations will empower sanitation workers to negotiate better wages and access benefits like health insurance and pensions.

7 Conclusion

This study provides a comprehensive analysis of the financial insecurity faced by sanitation workers in Arusha, with particular emphasis on manual emptiers. The findings, drawn from Key Informant Interviews (KIIs), Focus Group Discussions (FGDs), and Financial Diaries, paint a detailed picture of the daily financial challenges experienced by these workers, highlighting systemic issues, social stigmas, and the absence of formal support structures. The study's key findings and their broader implications are significant both for improving the lives of sanitation workers in Arusha and for informing global approaches to sanitation work.

7.1 Summary of Main Findings and Their Significance

1. Income Variability and Financial Instability

Sanitation workers, particularly manual emptiers, face substantial income variability due to the informal and seasonal nature of their work. Many rely on inconsistent income sources such as casual labor and small businesses, which makes it difficult to meet basic needs like housing, healthcare, and education for their families. High earners, who typically have diversified income streams, are in a more stable financial position, while low earners who depend on casual work are more financially vulnerable. The irregularity

of income leaves these workers unable to plan for long-term financial security, forcing many into debt.

2. Social Protection Gaps

A significant gap in social protection, particularly in accessing health insurance and pensions, exacerbates the financial vulnerability of sanitation workers. Most workers must pay for healthcare out-of-pocket, further depleting their limited resources. The absence of social safety nets such as health insurance, pensions, or even compensation for workplace injuries leaves workers unprotected and prone to financial ruin when emergencies arise.

3. Limited Access to Financial Services

Sanitation workers in Arusha face considerable barriers to accessing formal financial services. The lack of documentation, such as formal contracts or proof of stable income, disqualifies them from accessing savings accounts, loans, and other financial products. This exclusion pushes workers toward informal lending systems, where high-interest rates trap them in cycles of debt. Financial literacy is also low, compounding the challenges workers face in managing their finances effectively.

4. Impact on Livelihoods and Dignity

The financial insecurity of sanitation workers affects all aspects of their lives, including their ability to afford basic needs such as food, housing, and education. The social stigma associated with sanitation work further undermines their dignity and exacerbates their exclusion from the community. This stigmatization limits their earning potential and reinforces negative perceptions of their work, contributing to feelings of shame and personal indignity among workers.

5. Root Causes of Financial Insecurity

The systemic causes of financial insecurity include the informal and often criminalized nature of manual sanitation work, the lack of formal recognition, and limited support from local authorities. Workers are marginalized both economically and socially, which prevents them from accessing better opportunities, negotiating fair wages, or gaining social protections.

6. Innovative Solutions and Interventions

Despite these challenges, there are several opportunities to improve the financial security of sanitation workers. The study highlights worker-driven proposals such as forming cooperative savings groups, improving marketing strategies, and diversifying income streams. Furthermore, global best practices such as cooperative models, micro-finance schemes, and government-led social protection programs offer a framework for how sanitation work in Arusha could be better supported.

7.2 Broader Implications for Sanitation Work Globally

The challenges faced by sanitation workers in Arusha are not unique. Across the globe, sanitation workers, particularly those engaged in informal or manual tasks, encounter similar financial,

social, and occupational challenges. These issues highlight broader systemic inequities, where vital but marginalized labor remains underappreciated, underpaid, and unsupported.

Globally, the lack of formal recognition for manual sanitation workers mirrors the situation in many low-income countries, where informal work dominates the labor market. The failure to integrate sanitation workers into formal employment systems leaves millions of workers without access to social protection, financial services, or basic workplace rights. This not only perpetuates poverty but also endangers public health by limiting the effectiveness of essential sanitation services.

The findings from this study suggest several important considerations for improving sanitation work worldwide:

1. **Formalization of Employment:** Integrating sanitation workers into formal employment systems is crucial for securing their financial and social well-being. Governments and international organizations should work together to develop policies that formally recognize sanitation workers, offering them access to social protection schemes, health insurance, and pensions.
2. **Financial Inclusion and Support:** Expanding financial services to reach informal workers, including sanitation workers, can provide them with essential tools for managing income fluctuations, saving for the future, and accessing affordable credit. Micro-financing schemes, cooperative savings groups, and targeted financial literacy programs are necessary interventions that should be adapted globally.
3. **Occupational Health and Safety (OHS) Enforcement:** Improving the health and safety of sanitation workers through the enforcement of OHS standards is vital for reducing workplace injuries and medical costs. This is particularly important for manual emptiers, who face hazardous working conditions without adequate protective equipment.
4. **Tackling Social Stigmatization:** Addressing the negative perceptions surrounding sanitation work is critical for improving workers' dignity and status within their communities. Public awareness campaigns, professionalization efforts, and inclusive policy frameworks that emphasize the essential nature of sanitation work can help combat stigma.
5. **Building Resilient and Sustainable Sanitation Models:** Globally, there is an increasing focus on sustainable sanitation solutions, such as Decentralized Wastewater Treatment Systems (DEWATS) and waste-to-value initiatives. These models not only provide better waste management solutions but also create new economic opportunities for workers, contributing to both environmental and financial sustainability.

8 References

- Awuni, C. Y. (2020). *Work-Related Health Hazards Faced by Sanitation Workers in the Upper East Region, Ghana* (Doctoral dissertation, University of Ghana).WHO. (2017). Financing universal water, sanitation and hygiene under the sustainable development goals.
- Bereziat, E. (2009). *The market for mechanical pit-emptying in Dakar and the realities of engaging entrepreneurs. Building Partnerships for Development in Water and Sanitation: United Kingdom.*
- Banerjee, A., Duflo, E., Glennerster, R., & Kinnan, C. (2015). The miracle of microfinance? Evidence from a randomized evaluation. *American economic journal: Applied economics*, 7(1), 22-53.
- Chen, M. A. (2012). *The informal economy: Definitions, theories and policies.*
- CS Sharada Prasad/WaterAid/Safai Karmachari Kavalu Samit. (2019). *New report exposes horror of working conditions for millions of sanitation workers in the developing world. Geneva.*
- Devereux, S., and Sabates-Wheeler, R. (2004). *Transformative social protection (IDS Working Paper 232). Brighton: IDS.*
- Demirguc-Kunt, A., Klapper, L., Singer, D., and Ansar, S. (2018). *The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution. World Bank Publications.*
- Fidelis Paul, Marko J. Msambazi, & WaterAid Tanzania. (2012). *Fact sheet on sanitation financing.*
- Hutton, G., & Chase, C. (2016). *The costs of meeting the 2030 sustainable development goal targets on drinking water, sanitation, and hygiene. World Bank Group, Water and Sanitation Program.*
- Hutton, G., and Chase, C. (2016). *The knowledge base for achieving the sustainable development goal targets on water supply, sanitation and hygiene. International Journal of Environmental Research and Public Health*, 13(6), 1–35. <https://doi.org/10.3390/ijerph13060536>
- Hutton, G. (2016). *Can we meet the costs of achieving safely managed drinking-water, sanitation and hygiene services under the new sustainable development goals?. Journal of Water, Sanitation and Hygiene for Development*, 6(2), 191-194.
- Lund, F. J., and Srinivas, S. (2000). *Learning from experience: A gendered approach to social protection for workers in the informal economy. International Labour Organization.*
- Sahoo, S. (2020). *Social stigma, mental health, and sanitation workers: A review of the literature. Journal of Occupational Health*, 62(1), e12130.
- Sophie Trémolet, and Binder, D. (2010). *Evaluating the effectiveness of public finance for household sanitation in Dar es Salaam, Tanzania.*
- Trémolet, S., and Binder, D. (2013). *Evaluating the effectiveness of public finance for household sanitation in Dar es Salaam, Tanzania.*

Trémolet, S., and Binder, D. (2010). The Regulation of Water and Sanitation in DCs: Literature Review, Insights, and Areas for Research. *À Savoir*, 1.

Philippe, S., Hueso, A., Kafuria, G., Sow, J., Kambou, H. B., Akosu, W., and Beensi, L. (2022). Challenges Facing Sanitation Workers in Africa: A Four-Country Study. *Water (Switzerland)*, 14(22), 1–19. <https://doi.org/10.3390/w14223733>

Sharada Prasad, C. S., & Ray, I. (2019). When the pits fill up: (in)visible flows of waste in urban India. *Journal of Water Sanitation and Hygiene for Development*, 9(2), 338–347. <https://doi.org/10.2166/washdev.2019.153>

World Bank, ILO, WaterAid, WHO. (2019). Health, safety, and dignity of sanitation workers.

World Bank, ILO, WaterAid, and WHO. (2019). Health, safety and dignity of sanitation workers: an initial assessment. World Bank.

World Health Organization. (2017). UN-Water global analysis and assessment of sanitation and drinking-water (GLAAS) 2017 report: financing universal water, sanitation and hygiene under the sustainable development goals.

9 Appendices

9.1 Research tools

DRAFT DATA COLLECTION TOOLS AND GUIDE

Objective 1: To comprehensively investigate and understand the nature and extent of financial insecurity experienced by the Arusha Depot manual emptiers group in Arusha City, Tanzania.

Data Collection Tool: In-Depth Interviews

Introduction:

Welcome and explain the purpose of the interview.

Reiterate the importance of confidentiality and informed consent.

Encourage open and honest sharing.

Background Information:

Name:

Length of time working as a sanitation worker with Arusha Depot:

Current role and responsibilities within the group:

Income Stability and Predictability:

1. How has your experience been regarding income stability and predictability as a sanitation worker with Arusha Depot?
 - Please describe the regularity of income payments.
 - Are there any predictable factors that influence your income?

Challenges in Accessing Financial Resources:

2. Can you describe any challenges you've faced in accessing financial resources, including loans or savings mechanisms?
 - Have you encountered difficulties in obtaining loans or financial support when needed?
 - Are there barriers to accessing savings mechanisms or financial services?

Impact on Livelihood and Family Support:

3. What impact does financial insecurity have on your livelihood and your ability to support your family?
 - How does irregular income affect your daily life and expenses?
 - Have you had to make sacrifices or difficult decisions due to financial insecurity?

Acute Financial Insecurity:

4. Are there specific instances or periods where you experienced particularly acute financial insecurity?
 - Please provide details of these instances, including the causes and consequences.
 - Did these periods of acute financial insecurity have a lasting impact on your financial well-being?

Support and Coping Mechanisms:

5. What strategies or coping mechanisms do you use to manage financial challenges and uncertainty?
 - Have you sought support from family, friends, or community resources during difficult times?
 - Are there any successful strategies you've employed to improve your financial situation?

Recommendations and Solutions:

6. In your opinion, what could be done to improve the financial stability of sanitation workers within Arusha Depot?
 - Are there specific changes or initiatives that you believe would have a positive impact?
 - Do you have any recommendations for organizational improvements that could enhance financial security?

Objective 1: To comprehensively investigate and understand the nature and extent of financial insecurity experienced by the Arusha Depot manual emptiers group in Arusha City, Tanzania.

Data Collection Tool: Financial Diaries

Introduction:

Welcome and explain the purpose of maintaining financial diaries.

Reiterate the importance of detailed and accurate recording.

Provide guidelines on recording specific financial entries.

Participant Information:

Name:

Period for diary entries (e.g., one month):

Data Collection Tool: Financial Diaries	
Section	Questions and Instructions
Daily Income Sources and Amounts:	1. Please record your daily income sources and amounts for the specified period. - List all sources of income, including payments from Arusha Depot or any other sources. - Specify the amount received for each income source on each day.
Daily Expenses:	2. Document your daily expenses, including essential living costs, work-related expenses, and any unexpected or emergency expenses. - List all daily expenses, categorizing them as essential living costs (e.g., food, housing, utilities), work-related expenses (e.g., transportation, equipment), and any unexpected or emergency expenses (e.g., medical bills, repairs). - Specify the amount spent on each expense category on each day.
Loans and Debts:	3. Record any loans or debts, including their amounts and repayment schedules. - If you have borrowed money or have outstanding debts, please document the details of each loan or debt, including the lender, the loan amount, the purpose of the loan, and the repayment schedule. - Specify any interest rates or terms associated with the loans or debts.
Financial Transactions:	4. Note any financial transactions, such as savings deposits or withdrawals, during the data collection period. - Document any financial activities related to savings, investments, or withdrawals from financial institutions. - Include the purpose of the transaction and the amount involved.
Challenging Financial Days/Events:	5. If there were any particularly challenging financial days or events, please provide detailed entries about them. - Describe any days or events during the data collection period where you faced significant financial challenges or unexpected expenses. - Include details on what

	led to these challenges and how you managed them.
--	---

Interview Guide for Objective 2: Understanding Systemic Factors Influencing Financial Insecurity

Introduction

- Briefly introduce the purpose of the interview and the broader research project.
- Ensure the participant understands the confidentiality and use of the information shared.
- Obtain informed consent for participation.

Background Information

Role and Experience:

1. Can you describe your role and experience in relation to sanitation work in Arusha City?
2. How long have you been involved in this field?

Understanding Local Policies and Regulations

Policy Overview:

3. What policies are currently in place that directly or indirectly affect sanitation workers in Arusha City?
4. How do these policies impact the financial security of sanitation workers?

Policy Gaps and Challenges:

5. Are there any gaps in the current policies that contribute to financial insecurity among sanitation workers?
6. What challenges do you face in implementing policies that support sanitation workers?

Assessing Market Conditions and Economic Factors

Economic Environment:

7. How would you describe the economic conditions impacting the sanitation sector in Arusha City?
8. How do these conditions affect the earnings and job stability of sanitation workers?

Market Dynamics:

9. Can you discuss any market dynamics, such as demand for sanitation services, that influence the financial security of sanitation workers?

Social Norms and Community Perceptions

Community Attitudes:

1. How are sanitation workers perceived within the community?
2. Do social norms and attitudes towards sanitation work impact their financial opportunities or security?

Stigmatization and Discrimination:

1. Are there instances of stigmatization or discrimination against sanitation workers? How do these factors affect their financial well-being?

Innovative Approaches and Suggestions

Successful Models:

1. Are you aware of any successful models or interventions elsewhere that have improved the financial security of sanitation workers?
2. How could these models be adapted for Arusha City?

Recommendations for Improvement:

1. Based on your experience, what changes or innovations would you suggest to enhance the financial security of sanitation workers in Arusha City?

Concluding Questions

Additional Insights:

- Is there anything else you would like to share that we haven't covered?

Referrals:

- Can you suggest other individuals or organizations that could provide valuable insights into this issue?

Closing

- Thank the participant for their time and insights.
- Inform them about the next steps and how their input will be used in the research.

Focus Group Discussion Guide for Objective 3: Exploring Innovative Solutions and Best Practices

Introduction

- Welcome participants and introduce the purpose of the focus group.
- Explain the importance of their contributions and how they will be used.
- Assure confidentiality and create a comfortable, respectful environment for open discussion.

Setting the Stage

Personal Experiences:

1. Please share your experiences working in the sanitation sector in Arusha City. What are the biggest challenges you face, especially regarding financial security?

Brainstorming on Potential Solutions

Existing Strategies:

2. What strategies do you currently use to manage financial challenges in your work?
3. Are there local practices or solutions that have been effective?

Idea Generation:

4. If you had the resources and support, what changes would you implement to improve your financial situation?
5. Can you suggest any innovative solutions that haven't been tried yet?

Discussing Innovative Practices from Other Regions

Knowledge of Other Models:

6. Are you aware of any approaches or solutions from other cities or countries that have improved the financial security of sanitation workers?
7. How could these models be adapted for use in Arusha City?

Assessing Feasibility and Impact

Practicality and Implementation:

8. Which of the suggested solutions do you think are most feasible to implement in Arusha City?
9. What support (such as training, resources, policy changes) would be needed to implement these solutions?

Closing the Discussion

Final Thoughts:

10. Do you have any other comments or ideas about improving the financial security of sanitation workers in Arusha City?

Thank You:

Thank the participants for their time and valuable contributions.

Debriefing

After the discussion, debrief with the facilitators to summarize key points and plan for data analysis.

Best Practices Review Template

Template Components

Intervention Description:

1. Name and location of the intervention.
2. Brief description of the approach or solution implemented.

Objective and Target Group:

3. The primary goal of the intervention.
4. The target group (e.g., specific types of sanitation workers).

Implementation Details:

5. Steps taken to implement the intervention.
6. Any challenges faced and how they were overcome.

Results and Impact:

7. Outcomes of the intervention.
8. How it improved financial security for sanitation workers.

Applicability to Arusha:

9. Assessment of how this model could be adapted for Arusha City.
10. Potential barriers to implementation and possible solutions.

9.2 Field report

Introduction

In the heart of Arusha City, Tanzania, the Arusha Depot manual emptiers group stands as an example to the resilience and indispensable role of sanitation workers in maintaining urban health and hygiene. Comprising eight dedicated individuals with diverse backgrounds in manual emptying, street sweeping, and the maintenance of drainage and sewerage systems, this group represents a vital segment of the city's informal sector labor force that has long been marginalized and faced significant challenges. Historically, their work was not only undervalued but also deemed illegal, subjecting them to hazardous working conditions, financial insecurity, and societal stigmatization. The formalization of the Arusha Depot group, facilitated by a collaboration between the Arusha City Council and the WASH SDG Programme, marks a pivotal shift towards recognizing and improving the plight of sanitation workers. Equipped with personal protective gear and essential machinery, such as a semi-mechanized emptying machine and a tricycle for transportation, the group has taken a significant step forward. However, the threat of financial insecurity continues to persist, undermining their newly found status, dignity, and the sustainability of their livelihoods.

This field work report outlines the proposed research conducted by a team from the University of Dar es Salaam, in collaboration with the Centre for Community Initiatives (CCI), aimed at addressing the critical issue of financial insecurity among the Arusha Depot manual emptiers group. The research seeks to investigate the nature and scope of financial insecurity faced by sanitation workers, not only in Arusha City but also as a reflection of a global challenge within the sanitation sector. By understanding the multifaceted dimensions of financial insecurity, including income variability, lack of social protection, and limited access to financial resources, the study aims to identify root causes, document innovative solutions, and develop evidence-based recommendations for policy reforms that can safeguard the rights and dignity of sanitation workers.

The objectives of this research are manifold and ambitious. It endeavors to not only map out the challenges and innovations within the realm of financial insecurity among sanitation workers but also to actively engage the Arusha Depot group and other stakeholders in a participatory research process. This engagement is crucial for ensuring that the insights and solutions identified are grounded in the lived experiences of the workers themselves and hold practical relevance. The methodology adopted for this research is comprehensive and multi-pronged, involving a thorough literature review, in-depth interviews, financial diaries, key informant interviews, focus group discussions, and participatory action research methods. Each of these components is designed to uncover different layers of the financial insecurity problem and collectively contribute to a nuanced understanding of the issue at hand.

As the research unfolds, it is poised to offer valuable insights into the nature of financial insecurity in manual emptying sanitation work and propose feasible solutions to improve financial security for sanitation workers. By achieving its objectives, the study aims to empower sanitation workers, enhance their well-being, and advocate for policy changes that can create a more equitable and sustainable future for this essential workforce. The findings and recommendations of this research

are expected to serve as a critical resource for stakeholders at local and global levels in their efforts to promote the welfare and dignity of sanitation workers worldwide.

Field Work Objectives

The fieldwork component of this research project was designed to provide empirical insights and direct engagement with stakeholders to comprehensively address the financial insecurity issues among sanitation workers in Arusha City. The field activities were strategically planned to collect data, observe practices, and facilitate interactions that contribute to a robust understanding of the challenges and opportunities in improving financial security for manual emptiers. The specific objectives of the fieldwork are as follows:

1. Engage with Key Sanitation Stakeholders

A crucial objective of the fieldwork was to ensure broad and inclusive engagement with all relevant sanitation stakeholders in Arusha. This includes local government authorities (LGAs), the Arusha Urban Water and Sanitation Authority (AUWSA), non-governmental organizations such as SNV, academic institutions like Nelson Mandela University, financial institutions (banks and micro-finance institutions), the Arusha Depot group itself, and local community leaders. These engagements aim to gather diverse perspectives and foster a collaborative approach to addressing the identified challenges. This will be achieved through formal meetings, participatory workshops, and informal discussions, enabling a holistic gathering of insights and recommendations.

2. Conduct Comprehensive Field Data Collection

The fieldwork aimed to utilize a mix of qualitative data collection methods to capture the nuanced experiences of financial insecurity among sanitation workers. This includes:

Focus Group Discussions (FGDs): These discussions will be conducted with different segments of the sanitation workforce, including manual emptiers and street sweepers, to discuss common issues of financial insecurity, potential solutions, and perceptions of existing interventions.

Key Informant Interviews (KIIs): Interviews will be held with representatives from local authorities, financial institutions, and sanitation agencies to understand the policy and economic landscapes influencing financial security for sanitation workers.

In-depth Interviews: Targeted in-depth interviews with members of the Arusha Depot group and other manual emptiers will delve into personal experiences, the impact of financial insecurity on daily life, and personal aspirations.

3. Conduct Field Observations

Field observations were conducted to verify information provided in interviews and discussions and to directly observe the working conditions, tools, and methods employed by the sanitation workers. Observations were focus on the use of protective equipment, the operational efficiency of the provided machinery (e.g., the semi-mechanized emptying machine), and the general working environment. This "truth checking on the ground" were vital for assessing the real-world effectiveness of current practices and interventions.

4. Assess Systemic Issues and Opportunities

A critical aspect of the fieldwork is to identify and analyze systemic issues contributing to financial insecurity. This involves examining the structure of employment, payment systems, access to financial services, and social security benefits for sanitation workers. Additionally, the fieldwork sought to identify existing opportunities that could be leveraged to enhance financial stability, such as potential partnerships with financial institutions for tailored financial products or services and innovative funding mechanisms for sanitation initiatives.

9.3 Dissemination Report

Launching National Guidelines for Safeguarding the Health, Safety, and Dignity of Sanitation Workers in Tanzania:

A Workshop Report from Shinyanga, 25th–26th September 2024

Introduction

On the 25th and 26th of September 2024, a pivotal workshop was held in Shinyanga, Tanzania, focusing on the launch of the National Guidelines for Safeguarding the Health, Safety, and Dignity of Sanitation Workers. This workshop brought together a diverse group of participants, including sanitation workers, government representatives, local government authorities, development partners, and experts in the water, sanitation, and hygiene (WASH) sector. The event aimed to address the challenges faced by sanitation workers and to introduce strategies that would enhance their working conditions, financial security, and social recognition.

Sanitation workers play an essential role in maintaining public health and ensuring a clean environment. However, their work is often undervalued, poorly compensated, and performed under unsafe conditions. Many face social stigma, lack access to proper protective equipment, and have limited financial support, leading to precarious livelihoods. In recognition of these challenges, the government and various stakeholders developed the national guidelines, which provide a framework to promote the health, safety, and dignity of sanitation workers across the country.

The two-day workshop was designed to introduce these guidelines, facilitate dialogue, and foster collaboration among stakeholders. Day 1 focused on sharing experiences, presenting research findings on the financial insecurities faced by sanitation workers, and conducting a hands-on field demonstration of improved emptying techniques. Day 2 centered around the official launch of the national guidelines and discussions on the way forward for implementing these critical changes at the local and national levels.

The workshop included several key sessions, such as:

- Presentations by sanitation workers from different regions, highlighting the realities and challenges of their work.

- A detailed presentation on the financial insecurities of manual emptiers, specifically from the Arusha Depot Group.
- A fieldwork demonstration using the Pit Vaq machine to showcase how improved technology can enhance safety and dignity in sanitation work.
- A comprehensive discussion and launch of the newly developed national guidelines, emphasizing the importance of policies that address occupational health, financial security, and community perceptions.

This report summarizes the workshop's activities, discussions, and key outcomes. It provides insights into the pressing challenges sanitation workers face, showcases the potential impact of adopting improved technologies, and outlines the strategies discussed for implementing the national guidelines. By documenting this workshop, the report aims to guide stakeholders in their efforts to support and empower sanitation workers throughout Tanzania.



Day 1: Workshop Activities

Arrival and Registration

The workshop commenced on the 24th of September, 2024, with the arrival of participants and the registration process. This session brought together stakeholders, sanitation workers, local government authorities, and development partners, setting the stage for a day of informative presentations and discussions. Following registration, participants introduced themselves, fostering an environment of collaboration and shared purpose.

Introduction of Participants and Objectives of the Meeting

The session began with an introduction of all participants, highlighting the diversity of expertise and experiences present. The objectives of the workshop were outlined, focusing on the launch of the National Sanitation Workers Platform and the dissemination of findings from various studies, including an in-depth look into the financial insecurities faced by sanitation workers in Tanzania.

Key Presentations

The morning presentations provided a comprehensive overview of the sanitation sector and the challenges faced by workers. The main points covered included:

1. National Sanitation Workers Platform:

- The platform's **progress, future ambitions, and support needed** from stakeholders, including government support, were discussed.
- The presentation used various approaches, including testimonies from manual emptiers from Mwanza, Arusha, and Dodoma, as well as input from Local Government Authorities (LGA) and Ministry of Health (MoH) representatives.

2. Presentation on "Financial Insecurities for Sanitation Workers: A Case Study of Arusha Depot Group" a presentation from collaborative effort from University of Dar es Salaam and Centre for Community Initiatives CCI:

- **Organization Overview:** The Arusha Depot Group consists of 9 sanitation workers specializing in manual emptying, street sweeping, drainage, and unblocking sewerage systems. The group formalized in November 2022 under the guidance of SNV and Arusha City Council as part of the WASH SDG program. Despite their dedication, they operate in a challenging environment with limited community recognition and stigmatization.



- **Key Challenges:**
 - The group historically operated in dangerous conditions without formal recognition.
 - Financial insecurity remains a significant issue, impacting the sustainability of the business and group cohesion.
 - Lack of financial stability fuels stigmatization, limiting professional recognition and personal dignity. Financial insecurity also hinders business growth and formalization efforts.
- **Core Research Question:** "What is the nature of financial insecurity in manual emptying sanitation work, and what feasible solutions exist to improve financial security for sanitation workers?"
- **Objectives:** The presentation outlined three key objectives of the study:
 - To investigate and understand the nature and extent of financial insecurity experienced by the Arusha Depot manual emptiers group in Arusha City, Tanzania.
 - To identify the underlying factors contributing to financial insecurity within the sanitation work sector, focusing on irregular income, lack of social protection, and limited access to financial resources.

- To explore existing innovative solutions and best practices that address financial insecurity among sanitation workers, incorporating their perspectives and agency.
- **Overview of Research Methods:** The study employed various methods to gather comprehensive data:

Key Informant Interviews (KII): Conducted with 12 respondents from government institutions, NGOs, financial institutions, academic institutions, and community groups.

In-Depth Interviews: Held with 6 sanitation workers and beneficiaries to delve into personal experiences and challenges.

Focus Group Discussions (FGDs): Included 9 members of the Arusha Depot Group to understand collective experiences and identify actionable solutions.

Financial Diaries: Maintained by individual sanitation workers to track daily income, expenditures, loans, and repayments, providing insights into financial challenges.

Review of Literature: Examined policies, guidelines, and reports to contextualize findings within the broader policy framework.

Initial Research Findings:

- **Arusha Depot Group Formation and Growth:** Established on October 22, 2022, the group expanded to 10 members with support from SNV and Arusha City Council. They received tools and financial aid to improve services. Despite having a formal leadership structure and operating under a constitution, financial management gaps due to a lack of professionalism persist.



A presentation of key findings from University of Dar es salaam and center for community initiatives (CCI) on the financial insecurities studies.

- **Financial Insecurity and Instability:**

- Irregular income due to unpredictable job availability, high-interest loans, and seasonal variations contribute to ongoing financial challenges.
- Many workers rely on loans with high-interest rates, leading to financial strain.
- Seasonal changes, such as the rainy season, affect job opportunities and financial stability.

Challenges in Working Conditions:

Sanitation workers often operate in hazardous environments, with exposure to health risks such as human waste, sharp objects, and pathogens. Furthermore, they lack adequate personal protective equipment (PPE), and the PPE that is available is often uncomfortable, particularly in high temperatures, which impacts their health and productivity. Additionally, seasonal factors

exacerbate these challenges. During the rainy season, flooding and illegal waste disposal practices significantly reduce the demand for manual emptying services. This not only affects the workers' income but also forces them into more dangerous working conditions as they attempt to navigate flooded areas and handle waste with inadequate protection.

Policy and Regulatory Gaps:

Current policies in the sanitation sector largely focus on health and safety aspects, neglecting the financial security and stable income of sanitation workers. There are no specific regulations related to wages, benefits, or financial support within the existing legislative framework. As a result, workers are left without formal financial protections, and there is a lack of comprehensive guidelines that address fair compensation or measures to ensure their financial stability. This policy gap leaves sanitation workers vulnerable to economic hardships, perpetuating their financial insecurity.

Community and Social Perception:

The social stigma surrounding sanitation work significantly devalues the services provided by these workers. Many in the community view the nature of their work negatively, which not only affects the workers' sense of dignity and professionalism but also reduces their negotiation power. This social devaluation leads to lower pricing for their services, further perpetuating financial instability. Discrimination against sanitation workers also hinders their ability to secure consistent job opportunities, impacting their income and ability to establish formal recognition. Conversely, formal recognition and registration with local authorities have been found to improve community perceptions, granting sanitation workers more respect and a more positive reputation within their communities.

Economic and Market Dynamics:

Sanitation workers operate within a challenging economic environment. Many of their clients come from low-income communities, limiting the workers' ability to charge higher prices for their services. This financial constraint impacts both the workers and their clients, leading to a market dynamic characterized by undervaluation of services. Additionally, seasonal demand fluctuations pose a significant challenge. The demand for sanitation services often varies depending on the season and the condition of toilets. During the rainy season, demand decreases due to reduced accessibility and illegal waste disposal practices, further destabilizing the workers' income. This inconsistency in demand, combined with a lack of formal market recognition, makes it difficult for sanitation workers to secure a stable and reliable income.

Key Insights:

- **Economic Instability:** The unpredictable nature of the economic environment, seasonal changes, and a lack of formal market recognition make it extremely difficult for sanitation workers to plan and maintain a stable income.

- **Social and Financial Impact:** The community's perception of sanitation workers significantly influences both their social standing and financial well-being, impacting their job opportunities and income stability.
- **Gap in Financial Support:** Despite policies to protect health and safety, the absence of financial security measures leaves workers vulnerable to economic hardship.
- **Need for Reforms:** Addressing these challenges requires policy reforms to ensure fair wages, financial support, and stability for sanitation workers, thus preventing long-term economic difficulties.

Field Work Session: Demonstrating Safe and Dignified Emptying Practices

On the first day of the workshop, participants had the opportunity to witness a practical fieldwork demonstration conducted by a group of manual emptiers from both Arusha and Shinyanga. This session aimed to showcase how improved equipment and practices could enhance the safety, health, and dignity of sanitation workers.

The group of emptiers used the **Pit Vaq machine**, a mechanized pit-emptying device designed to improve efficiency and reduce health risks during the emptying process. The demonstration highlighted several key aspects of using advanced technology in manual emptying:

1. **Improved Safety:** The Pit Vaq machine allowed the workers to conduct the emptying process from a safe distance, minimizing direct contact with waste. This significantly reduced the exposure to hazardous conditions, highlighting the importance of using modern equipment to safeguard the health of sanitation workers.
2. **Enhanced Efficiency:** The participants observed how the machine's suction capacity and operation speed could handle a larger volume of waste in a shorter time compared to traditional manual methods. This not only improved productivity but also showed how adopting such technology could help workers provide more efficient services to the community.
3. **Promoting Dignity:** The use of the Pit Vaq machine underscored the potential for sanitation work to be conducted in a more dignified manner. The machine's design and operation facilitated a cleaner, more professional approach to pit emptying, reducing the stigma and enhancing the community's perception of the workers. The demonstration emphasized that when sanitation workers have access to proper tools and technology, they can perform their duties with greater respect and professionalism.

During the session, workshop participants discussed the significance of investing in such equipment to support sanitation workers across Tanzania. The emptiers from Arusha and Shinyanga shared their experiences, explaining how using the Pit Vaq machine had positively impacted their work environment and improved their overall well-being. They emphasized that access to improved tools not only enhances safety but also boosts their confidence and pride in their profession.

This hands-on fieldwork demonstration reinforced the workshop's message: safeguarding the health, safety, and dignity of sanitation workers requires both policy support and practical investments in technology and equipment. It served as a compelling example of how implementing the guidelines can lead to real, tangible improvements in the lives of sanitation workers.



A practical fieldwork demonstration conducted by a group of manual emptiers from both Arusha and Shinyanga

Day 2: Launch of the Guidelines

Opening Remarks

The second day of the workshop began with an opening address by Mr. Joseph Bilago the head of occupational health and safety from the Ministry of Health. In his speech, he emphasized the crucial role that sanitation workers play in maintaining public health and hygiene, while also acknowledging the significant challenges they face in their line of work. The address set the tone for the day's discussions, emphasizing the importance of safeguarding the health, safety, and dignity of sanitation workers in Tanzania.



The guest of honor, Assistant director for preventive health service from the Ministry of Health giving remarks on the official launch of the guideline for safeguarding health, safety and dignity for sanitation workers.

Official Launch

The official launch of the national guidelines was a landmark moment, symbolizing a unified commitment to improving the working conditions of sanitation workers. The launch was attended by key stakeholders, including representatives from the government, development partners, and sanitation workers themselves. During the event, the chair of the newly formed network for sanitation workers shared critical challenges facing the sector. These challenges included:

- **Poor Equipment:** Inadequate tools for safely emptying and unblocking toilets.
- **Limited Skills:** A lack of proper training on handling human waste, posing health risks.
- **Limited Collaboration:** Insufficient support and coordination from health officials.

- **Financial Constraints:** Limited access to financial and technical support, coupled with low prices for their services, often resulting in sanitation workers being unrecognized and disrespected.
- **Loss of Equipment:** Challenges in maintaining the tools required for their services.

The chair also outlined the network's current vision: to increase its membership, acquire the necessary skills for safe emptying, source grants and aid to support business growth, and secure low-interest loans to improve sustainability.

Overview of the Guidelines

The newly launched national guidelines focus on key areas essential for the well-being of sanitation workers:

1. **Occupational Health and Safety (OHS):** The guidelines highlight the need for providing sanitation workers with appropriate personal protective equipment (PPE), regular health check-ups, and training in safe waste handling practices.
2. **Dignity of Work:** The guidelines emphasize the importance of respecting sanitation workers and recognizing their crucial role in public health. This includes advocating for formal contracts with clients to professionalize their services and protect their rights.

Discussion and Way Forward

After the launch, a discussion session provided participants with an opportunity to delve into the implications of the guidelines and outline actionable steps for their implementation.

- **Development Partners' Perspective:** Representatives from the World Bank, SNV, and WaterAid Tanzania underscored three critical points:
 1. **Collaboration and Partnerships:** The success of this initiative hinges on building strong collaborations among stakeholders, including government bodies, NGOs, and the sanitation workers themselves.
 2. **Dissemination:** The guidelines serve as an excellent starting point but require intentional and widespread dissemination to make them truly meaningful.
 3. **Annual Reflection:** To ensure the guidelines remain relevant and practical, it is imperative to conduct annual reviews to assess their effectiveness and make necessary improvements.
- **Opportunity for Compensation:** A representative from the Workers Compensation Fund (WCF) outlined an important benefit for sanitation workers, highlighting that they could contribute to the fund and, in turn, benefit from compensations in case of emergencies, such as accidents.

- **Guest of Honor's Remarks:** The Assistant Director for Preventive Health Services emphasized several key points:
 - **TAMISEMI and MoH Collaboration:** A call for the Prime Minister's Office (Regional Administration and Local Government - TAMISEMI) and the Ministry of Health to work together to ensure that sanitation workers benefit from interest-free loans to support their businesses.
 - **Pit Emptying Machines:** Each district should facilitate the purchase of Pit Vac emptying machines to enhance safety and efficiency in service delivery.
 - **Decision-Making Based on Research:** The guest of honor stressed the importance of evidence-based decision-making, urging researchers to support innovative solutions for faecal sludge reuse, including composting, biogas production, and other resource recovery methods.
 - **Formalization of the Network:** Sanitation workers' networks should be formally registered with TAMISEMI to legitimize their activities and ensure proper support.
 - **Support Measures:** The government and local authorities were encouraged to allocate budgets for equipment, offer interest-free loans, review labor laws, and promote contracts between sanitation workers and their clients to professionalize the sector.

The discussions concluded with a collective agreement on the need for ongoing support, resource allocation, and collaborative efforts to uphold the guidelines and address the identified challenges facing sanitation workers. The workshop participants also committed to regular evaluations and the continuous improvement of these guidelines to ensure they remain effective and relevant.

Report Outline Highlights:

1. Clear Problem Articulation

The report begins by clearly defining the financial insecurity faced by the Arusha Depot manual emptying group. It outlines the systemic issues leading to income variability, lack of social protection, and exclusion from formal financial systems. This problem statement sets the stage for understanding the broader challenges faced by sanitation workers in the region.

2. Comprehensive Literature Review:

The literature review demonstrates a deep understanding of both global and local challenges faced by sanitation workers. It contextualizes the financial insecurity of manual emptiers in Arusha within the broader framework of informal labor, social stigma, and limited access to social protection. The review draws from global studies on sanitation work and informal employment, highlighting the common threads of vulnerability and marginalization.

3. Detailed Methodology:

The methodology section clearly explains the mixed-method approach used, combining

Key Informant Interviews (KIIs), Focus Group Discussions (FGDs), and Financial Diaries. The methodology ensures that both qualitative and quantitative data were collected to provide a holistic view of the financial challenges faced by the sanitation workers, ensuring that the research is robust and well-grounded.

4. **Presentation of Findings:**

The findings are well-organized and relatable, providing a thorough analysis of income variability, social protection gaps, and limited access to financial services. The data is presented in a manner that highlights the daily financial struggles of the sanitation workers, making it easy for readers to understand the implications of the findings for the workers' livelihoods and dignity.

5. **Concrete Recommendations:**

The report offers actionable recommendations that are tailored to policymakers, sanitation worker organizations, and other stakeholders. These include policy interventions for formalizing employment, expanding financial inclusion, and improving occupational health and safety (OHS) standards. The recommendations are designed to be implemented in both local and global contexts, ensuring that they are practical and feasible.

6. **Practical Engagement:**

A key strength of the report is its emphasis on participatory research. The sanitation workers were actively involved as co-creators in the study, contributing their experiences and insights. This engagement ensures that the report reflects the real-world challenges faced by the workers and that the recommendations are grounded in their lived experiences, making the report not just an analysis but a platform for worker-driven advocacy.