

2018–2023 Make a Splash!

Lessons learned from five
years of sanitation and hygiene
market strengthening



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**MAKE A
SPLASH!**

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Abbreviations

Community health promoter	CHP
Community-led total sanitation	CLTS
Faecal sludge management	FSM
Make a Splash!	MaS!
Swacch Bharat Mission	SBM
Sustainable Development Goal	SDG
Standard operating procedure	SOP
Toilet business owner	TBO

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Foreword

In a period beset by unprecedented challenges, including climate change, pandemics, and conflict, it is more crucial than ever to urgently ensure everyone has access to safe sanitation and hygiene.

An estimated 3.5 billion people are still living without access to safe sanitation. This lack of access is having a profound toll, with around 1,000 children under the age of five dying every day from diseases, attributed directly or indirectly to unsafe water, sanitation and hygiene practices.

In 2018, LIXIL and UNICEF formed the Make a Splash! partnership. This landmark collaboration is UNICEF's largest shared-value partnership for water, sanitation, and hygiene (WASH). It arose from a mutual commitment to advancing Sustainable Development Goal (SDG) 6 and, specifically, to increasing demand for safe sanitation, promoting good hand hygiene practices, and strengthening sanitation markets.

Since its inception, the Make a Splash! partnership has made remarkable strides, enabling 12.7 million people across diverse geographies to gain access to basic sanitation and hygiene. Initially focusing its efforts in Ethiopia, Kenya, and Tanzania, the partnership has expanded its reach to India, Indonesia, and Nigeria. Through a multifaceted approach – encompassing government-led systems change, behaviour change, and capacity building – the partnership has generated important lessons for the global community; these are presented in this milestone report.

One of the central elements of the Make a Splash! approach is a strong focus on leveraging both public and private finance as catalysts for change. By mobilizing over US\$2 million from government budgets towards sanitation and hygiene improvements, the partnership has bridged the gap between policy intent and tangible action. Notable examples include local governments in Kenya committing to incentivizing community health promoters, and a Mayor in Indonesia introducing a sanitation tariff to fund essential services.

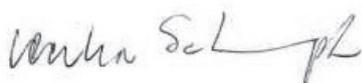
Make a Splash! has unblocked market barriers to ensure long-term sustainability. By taking a public-private partnerships mindset and melding government health promotion with private supply chains, the partnership has created a conducive environment for innovation and growth. From rural Ethiopia to urban India, it is our hope that this partnership's impact will reverberate far and wide.

LIXIL and UNICEF remain cognizant of the enormous challenges ahead. As we mark five years of the partnership and reflect on our collective achievements, we fortify our resolve and push for thriving, inclusive sanitation and hygiene markets in every context. By sharing these insights, LIXIL and UNICEF aim to inspire and empower sanitation and hygiene champions around the world to work towards sanitation and hygiene for all.

Signed by,



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Executive summary

An estimated 3.5 billion people are still living without safe toilets that protect human and environmental health.¹ That's almost half the global population. These figures come with a devastating human cost. Each day, about 1,000 children under 5 die from diseases caused directly or indirectly by unsafe water, sanitation and hand hygiene.²

In 2018, LIXIL and UNICEF joined forces to make the Make a Splash! (MaS!) partnership. As the largest shared-value partnership for water, sanitation and hygiene (WASH) in UNICEF, it combines the strengths of both organisations to support progress towards Sustainable Development Goal (SDG) 6. More specifically, it aims to promote safe sanitation and good hygiene, increase the supply of hygiene and sanitation products and solutions, and strengthen sanitation markets.

Since it started in 2018 the MaS! partnership has reached 12.7 million people. Beginning in Ethiopia, Kenya and Tanzania, the partnership focused on improving supply and demand of sanitation services, reaching 2.9 million people in just three years. Building on this success, the partnership expanded to reach children and families in six countries by including India, Indonesia and Nigeria, reaching a further 9.8 million people by the end of 2023. Activities included supporting government-led, community-led total sanitation (CLTS) approaches and ensuring that a steady supply of affordable products was available where people needed them. Schools and health facilities were refurbished with products such as SATO Pans to serve as models for communities. Hygiene programmes were integrated to teach hand washing and supply facilities, such as SATO Taps.



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A demonstration of handwashing techniques at a school in Araria, Bihar, India.

- 1 Progress on household drinking water, sanitation and hygiene 2000–2022: special focus on gender. New York: United Nations Children's Fund (UNICEF) and World Health Organization (WHO), 2023.
- 2 Triple Threat How disease, climate risks, and unsafe water, sanitation and hygiene create a deadly combination for children. New York: United Nations Children's Fund (UNICEF), 2023

The Make a Splash! partnership has helped to direct over US\$2 million from government budgets to sanitation and hygiene improvements in the last five years, with governments in Ethiopia, India, Indonesia, Kenya and Nigeria making specific funding commitments. For example, Kitui County in Kenya committed to providing stipends for community health promoters who help communities get involved in sanitation and hygiene. A mayor in Indonesia introduced a sanitation tariff to help fund desludging services for all residents. Ongoing advocacy in Ethiopia includes pushing for tax exemptions on the importation of sanitation products and making sanitation a defined loan item within the mainstream banking sector.

Meanwhile, the partnership facilitated nearly US\$6 million in loans to strengthen sanitation markets. Each country has developed different financing options. In India, MaS! helped link state governments with banks and microfinance institutions, while in Indonesia, the partnership helped create credit schemes for households purchasing safe septic tanks. The partnership explored different innovations, including a 'transactional ledger' banking app in Kenya to help local groups save and lend each other money for sanitation improvements.

The MaS! partnership supported governments to be in the lead and ensure the human right to sanitation is achieved. This resulted in over 40 developed or strengthened policy instruments. For example, the India programme supported government strategies to retrofit single pit toilets to become safely managed and link rural and urban sanitation services. In Indonesia, MaS! helped set up a national target for safely managed sanitation and develop local regulations for desludging septic tanks. The partnership trained over 738,000 stakeholders across all countries through various approaches, including trainings and mentorship. This included self-help groups, masons and government officials in India on the need for a second pit in their toilet system so waste could be treated in the ground instead of being emptied.

Furthermore, 21 data and information systems were set up or strengthened in all countries to improve decision making and build trust between stakeholder groups. The Indonesia programme helped set up a digital one-stop-shop platform to connect consumers to approved suppliers of safely managed sanitation products and services. The partnership also supported a WASH information management system in Nigeria that allows the government to monitor progress and plan for future investments.

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The Make a Splash! partnership has helped to direct over US\$2 million from government budgets to sanitation and hygiene improvements in the last five years.

Despite its abundance of water, Zanzibar faces a chronic shortage of safe drinking and farming water due to frequent groundwater contamination by seawater and sewage, exacerbated by poor infrastructure and heavy seasonal rains that can spread lethal diseases like cholera. In response, UNICEF and its partners have mapped over 1,000 water vendors and institutions, including schools and healthcare facilities that store water in bulk, distributed chlorine tablets, and trained nearly 500 vendors and institutions on their proper use.

After five years of positive and inspiring experience, LIXIL and UNICEF want to document the market-based sanitation approaches in each country and draw out the lessons learned on sanitation market development throughout the partnership. The research question guiding this exercise was: *'How has MaS! contributed to strengthened sanitation markets?'*

To answer the question, country approaches were analysed using a document review and interviews with LIXIL and UNICEF staff. Table 1 summarizes the different approaches taken in each of the MaS! countries.

Country	Who is the consumer?	What is the approach?	Which market functions have been addressed?
Ethiopia	Rural households with an unimproved toilet.	Rural supply chain strengthening.	Skills, promotion, finance, policy and advocacy.
India	Rural households in Bihar and Odisha states needing to repair or retrofit a single pit toilet to a twin pit toilet.	Supporting government retrofitting campaigns.	Research and development, promotion, finance, skills and policy and advocacy.
Indonesia	Urban or peri-urban households with non-compliant septic tank or in need of emptying services.	Bundling safely managed sanitation services into a digital platform.	Information for businesses on safe septic tanks, promotion, finance, regulation and monitoring.
Kenya	Rural first-time toilet users or upgraders found in eight counties.	Professionalization of community health promoters as toilet promoters and distributors.	Promotion, skills, finance and policy.
Nigeria	Rural households with no toilet or an unimproved toilet.	Supporting toilet business owners to supply sanitation goods and services.	Promotion, skills, finance and policy.
Tanzania	Rural or peri-urban consumers who are first time toilet users or toilet upgraders.	Integrating safely managed sanitation solutions into community-led total sanitation.	Promotion, skills and finance.

Table 1: Summary of MaS! country approaches.

Comparing country approaches can offer reflections on how countries have responded to common issues. This can guide programming in other countries facing similar concerns. Five key lessons have been distilled from the MaS! experience so far.

Lesson 1

Sustainable and inclusive market growth requires addressing barriers to household investment, such as a lack of supplier incentives, policy and regulatory issues, and a lack of access to finance.

UNICEF's 2020 guidance on market-based sanitation provides good reasons why development agencies choose to work on making sanitation markets work better for people.³ Most sanitation improvements in lower-income countries are the result of people investing their own resources to buy a toilet of their choice from a supplier. Many sanitation markets, however, do not work well for poor consumers. Limited affordable options are available at convenient locations, and it may be hard to find skilled labour to install one. Even if the components for a desirable toilet are available, buying a toilet may not be a priority for a family due to cash flow and seasonal liquidity constraints. And local government housing or sanitation regulations may not incentivize a household to build, use or empty a toilet, even if incentives exist on paper.

One of the key lessons learned across different sectors is that to make markets function effectively, inclusively and sustainably, it is often necessary to take a holistic approach to market development. Early MaS! planning and reporting documents showed an initial emphasis on improving demand for toilets and ensuring products were available locally, without addressing some of the more systemic constraints. This is a critical first step in all market-based sanitation programmes. Over time, however, the partnership evolved to add last-mile distribution models and working on, for example, finance, policies, guidelines and regulations.

Lesson 2

Public-private promotion – blending public health and private sales incentives – offers a smart way to create ongoing demand for sanitation.

Developing marketing or demand creation strategies that outlast short term donor-funded projects is a key challenge in strengthening sanitation markets.⁴ It is well known that widespread use of toilets and the safe management of waste achieve public health goals. This provides the rationale for governments to invest in building demand for sanitation. Sanitation enterprises also invest in marketing and sales because they have an incentive to break even and grow in the long term. Given there are both public health and private enterprise benefits of a household investing in a toilet or sanitation services, there is an argument to be made for a shared investment into creating awareness and demand.⁵ 'Public-private promotion', a joint effort that leverages both public health incentives and private enterprise sales goals, is a promising approach seen in all MaS! country contexts, albeit in different ways given the nature of the sanitation challenge in each country.

3 United Nations Children's Fund, Guidance on Market-Based Sanitation, UNICEF, New York, 2020.

4 USAID, Scaling Market Based Sanitation: Desk review on market based rural sanitation development programmes, USAID Water, Sanitation, and Hygiene Partnerships and Learning for Sustainability (WASHPaLS) Project, Washington, DC, 2018.

5 USAID, Water, sanitation and hygiene partnerships and learning for sustainability final report, USAID WASHPaLS Project, Washington, DC, 2023.

Lesson 3

Reducing market fragmentation in both urban and rural contexts is key to strengthening markets.

The supply chains for the construction and management of sanitation systems are fragmented in most of the MaS! contexts, particularly in the four African countries. MaS! countries have tested multiple approaches to connect rural consumers to sanitation supply chains. This is in addition to mapping and creating links between consumer-facing outlets, such as hardware stores and masons. They included working with sanitation businesses and builders in Ethiopia and Nigeria, community health promoters in Kenya, and local government officials in Tanzania.

In contrast to the last-mile distribution challenges found in many rural African contexts, products are generally more available in Indonesia and India. The challenge in these contexts is not connecting consumers to existing supply chains, but improving relationships and reducing fragmentation among existing value-chain actors. For example, in Indonesia, a digital platform aims to overcome fragmentation by consolidating all actors along the entire sanitation value chain, such as local public health promoters, financial institutions, suppliers of approved septic tanks, pit emptying businesses and local regulatory agencies. In India, the approach to overcome fragmented value-chain actors is better described as convergence with existing public financing and infrastructure, for example persuading publicly funded self-help groups to add sanitation to their lending portfolios or creating links between urban faecal sludge service providers with outlying rural consumers.

Lesson 4

Smart public finance can expand and sustain access to safe sanitation and strengthen markets.

A 2020 report⁶ estimated an annual investment of US\$105 billion will be needed to meet SDG 6.2 by 2030. The typical response to the large investment costs is to point out that neither public nor development partner funding will be sufficient to fill the gap and that private sector investment will be needed. The opportunity to leverage private sector investment is often one of the reasons why governments and their partners opt to support market-based approaches to development challenges. Yet, in practice, commercial finance at scale has not materialized to date. Recent analysis showed that between 2017 and 2019, only 1.5 per cent of all commercial finance – the equivalent of 2 per cent of the sector funding gap – mobilized globally was directed to water and sanitation.⁷ Advocating different uses of *existing* public finance will thus be important to ensure everyone, everywhere, has a safe toilet system to use.

The MaS! partnership has successfully influenced governments to use public sources of funding in ways that strengthen the sanitation market. Examples are setting up public lines of credit for financial institutions to on-lend to consumers in India and Nigeria, and promoting sanitation through public health messaging in Kenya and India that resulted in increased household investments.

6 Hutton, Guy, and Mili Varughese, Global and Regional Costs of Achieving Universal Access to Sanitation to Meet SDG Target 6.2, UNICEF, New York, 2020.

7 World Water Council, Blended finance in the water sector, 2022. Accessed 29 January 2024: www.worldwatercouncil.org/sites/default/files/World_Water_Forum_09/WWC-Successful-Blended-Finance-Projects_WEB_EN.pdf

Lesson 5

A more nuanced understanding of policy enablers or blockers is key to creating a stable and well-functioning market.

In some places markets are not reaching their full potential due to affordability, lack of information or other barriers. This is not because of a lack of demand, but because policies, strategies, guidelines or laws do not support sanitation and hygiene markets. Over time, the MaS! partnership countries have deepened their understanding of how policies, guidelines, or bylaws support or inhibit sanitation markets processes and outputs. These efforts can be understood as three types of intervention:

- **Support an enabler:** This type of intervention supports the creation or revision of a policy, strategy, law or guideline, enabling an inclusive and efficient sanitation market. Most MaS! experience falls into this category. For example, India supported a state government to develop a finance and retrofitting strategy which was not only useful for planning, but also helped to persuade a different government agency to provide a line of credit to self-help groups for sanitation.
- **Remove a policy blocker:** This type of intervention advocates a change in rules that inhibit sanitation market efficiencies and inclusivity. For example, advocacy in Ethiopia for reduced taxes on imported sanitation goods is expected to contribute to sector growth by removing restrictive policies on import taxes.
- **Sustain a gain:** This type of intervention supports a new policy, strategy, law, etc., that sustains something that has been proven to work. A good example of this type of challenge is the Kitui County health bill in Kenya, which provides public monthly stipends to community health promoters (CHPs) who advocate sanitation. It is built on a positive, practical experience of leveraging the CHP structure and trusted relationships in communities to promote and supply sanitation to rural consumers.



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Momina washes her hands with soap. UNICEF provides clean water in her school and to the community.

Below is a summary of the five key lessons learned over the partnership so far. One of the most important lessons has been the need to work beyond the supply and demand of sanitation and hygiene products and services. The MaS! experiences build on the growing body of evidence that programmes must address factors such as finance for consumers and businesses or the establishment of standards and regulations for product and service quality. Much has been learned about how to promote sanitation skilfully using public and private resources. Various strategies to overcome market fragmentation show that new solutions to old problems are possible, such as connecting consumers to supply chains or consolidating value-chain actors. Many sanitation market approaches focus on increasing commercial finance in the sector. MaS! has shown that public sources of finance can also be directed to improve how sanitation markets work, and such efforts are often more catalytic. MaS! has shown that quick progress can be made when identifying and addressing specific rules that block, enable or sustain changes.

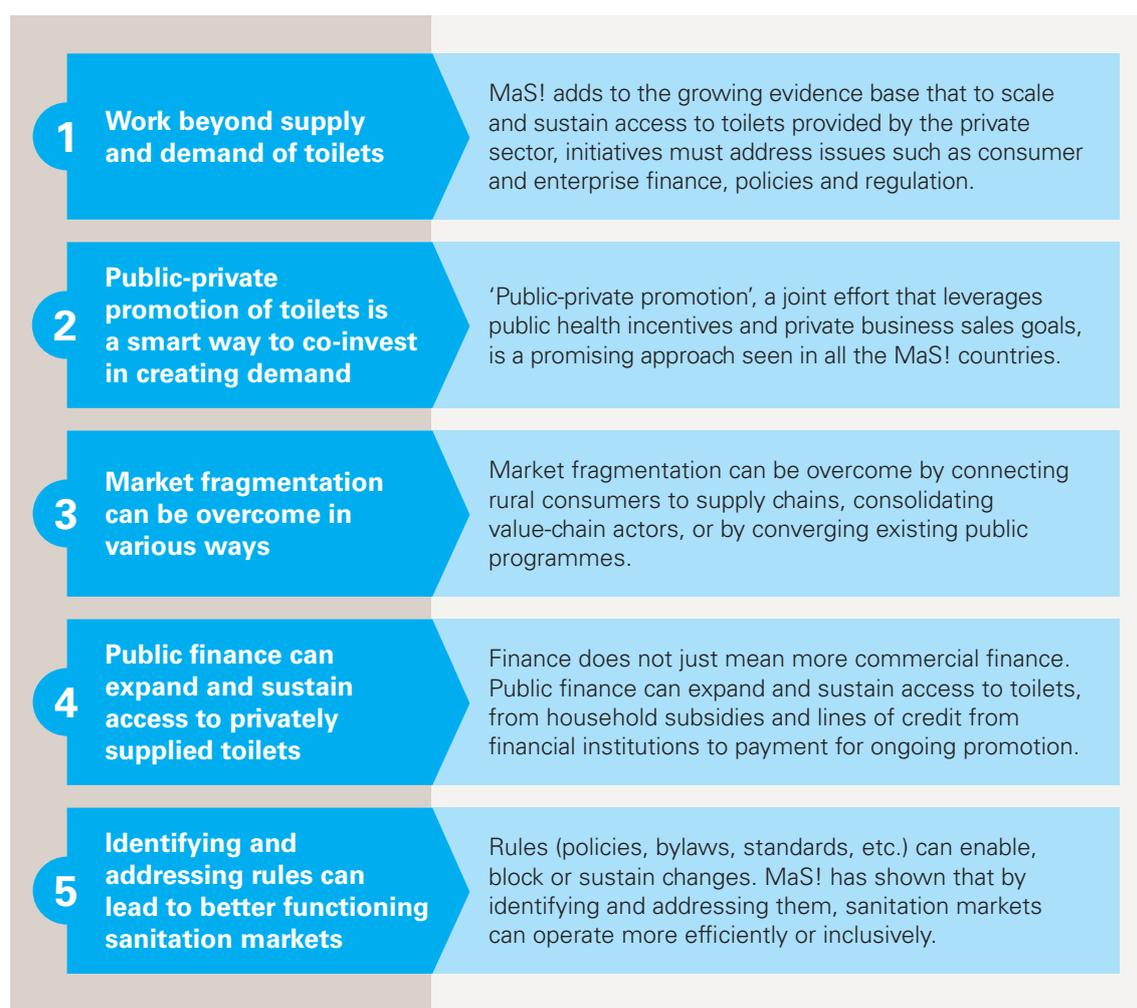


Figure 1: Summary of lessons learned in the MaS! partnership

The MaS! partnership has shown how two organizations with different mandates can apply their complementary strengths to enable people to build, upgrade or safely empty a toilet in contexts as diverse as rural Kenya and urban Indonesia. Much work remains, however, to ensure everyone, everywhere, uses a safe sanitation system by 2030. MaS! will continue to push the boundaries of market strengthening and facilitate the exchange of experiences and learning in the coming years. The box below provides some suggestions to other country programmes or initiatives working to strengthen sanitation markets and accelerate progress towards SDG target 6.2.

Box 1

Strengthening sanitation markets: Incorporating lessons from MaS! into new or existing sanitation market strengthening initiatives.

UNICEF provides comprehensive guidance⁸ on how to implement market-based sanitation programmes. UNICEF's recently released Game Plan to Reach Safely Managed Sanitation provides information on how to support governments to reach SDG 6.2 by 2030. The MaS! experience and lessons learned offer practical steps to support better functioning sanitation markets.

Beyond supply and demand: Identify and address 'what else' beyond promoting and distributing toilets would catalyse a more efficient and inclusive sanitation market, such as interventions to strengthen finance, policies and skills.

Promotion: Identify public agencies and businesses that share common goals. Public agencies engage in promoting sanitation, such as community health promoters, public utilities and district health offices. Businesses, such as manufacturers, retailers, builders or financial institutions, have an incentive to promote sanitation to sell their wares. Brokering relationships between public agencies and private companies has been one tactic MaS! has successfully employed to facilitate this 'public-private promotion'.

Market fragmentation: Sanitation supply chains are fragmented in nearly all contexts. Where last-mile distribution is the challenge, look for non-traditional actors who may have an incentive and ability to promote and supply toilets alongside their other work. In contexts where fragmentation among value-chain actors is the greatest problem, experiment with strategies that incentivize collaboration, such as between manufacturers and installers, financiers and retailers, or regulatory agencies and emptiers.

Public finance: Commercial finance has been slow to crowd into the sanitation market, especially for poor rural consumers. A key lesson from MaS! has been the positive experience of well targeted public finance to enhance private sector activity.

Rules that enable, block or sustain: Focus efforts on addressing rules that inhibit efficient sanitation market performance, such as creating or updating policies, guidelines or bylaws.

8 United Nations Children's Fund, Guidance on Market-Based Sanitation, UNICEF, New York, 2020.

Introduction

Overview of Make a Splash! partnership

An estimated 3.5 billion people live without safe toilets that protect human and environmental health. That's almost half the global population. These figures come with a devastating human cost. Each day, about 1,000 children under 5 die from diseases caused directly or indirectly by unsafe water, sanitation and hand hygiene.

Launched in 2018, the 'Make a Splash!' (MaS!) partnership between LIXIL and UNICEF combines the two organizations' complementary strengths to support progress towards Sustainable Development Goal (SDG) 6 to ensure access to water and sanitation for all.

The MaS! partnership shows how businesses such as LIXIL can support governments to enable sanitation markets to accelerate progress towards achieving SDG 6.2, to achieve access to adequate and equitable sanitation and hygiene for all and end open defecation by 2030. In just three years, MaS! helped improve sanitation and hygiene for 2.9 million people in Ethiopia, Kenya and Tanzania. Building on the success of the partnership, the scope expanded in 2022 to reach children and families in six countries by including India, Indonesia and Nigeria, enabling access to sanitation and hygiene for an additional 9.4 million people by the end of 2023.



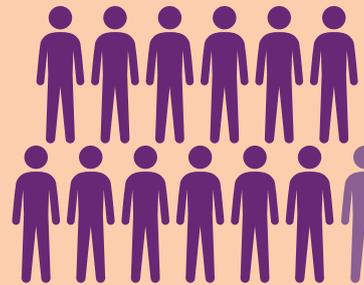
© UNICEF Ethiopia/2023/Dennisew Bizuwerk

Both Saada and Hana want to be a doctor for two different reasons. While Saada's says doctor help pregnant women to have a baby, Hana believes doctors primary role is to help sick people.

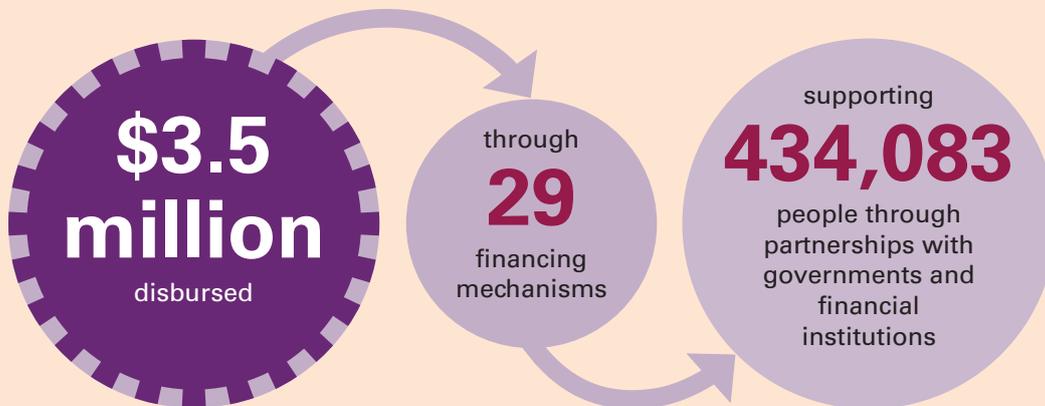
The impact of five years of MaS!

12.7 million

people have been reached with sanitation and hygiene services



CONSUMER FINANCING



GOVERNMENT FINANCING



\$1.8 million

of government budget has been leveraged

POLICY



29

policy instruments have been supported

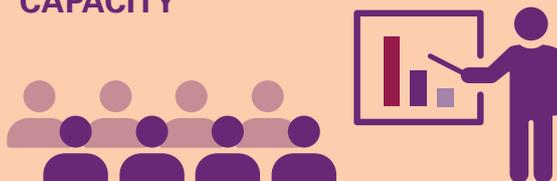
DATA



11

government data systems have been strengthened

CAPACITY



414,629

stakeholders have received training

Results Area 1: Improved supply and demand of sanitation and hygiene products and services

The sale and installation of SATO products have made a significant contribution to the results of this partnership. Several countries build on community-led total sanitation interventions that look to trigger communities to take ownership of their sanitation challenges and ensure everyone in the community is using an improved toilet, so excreta are safely removed from human exposure. With this increased demand, efforts are made to ensure a steady supply chain of human-centred products, such as SATO Pans, Stools and Taps, are available and conveniently found. Once people are triggered to want to give up open defecation practices or use of unimproved (unsafe) latrines, they either construct their own toilets or enlist the support of a mason to do it for them. If they are unable to afford these products and services, the partnership makes sure loans are available.

Schools and health-care facilities are provided with gender-segregated, disability-friendly toilets using desirable products such as SATO Pans to serve as a model of affordable options for the community to emulate and the government to replicate in other areas. Since there is a risk of contact with excreta when using the toilet, hygiene behaviour change is a critical part of the programme.

Results Area 2: Leveraging finance and funding to the sanitation and hygiene sector

UNICEF works through government structures, which involves supplying financial and technical assistance to government-led sanitation campaigns. Technical assistance is supplied to help governments function more efficiently and equitably by supporting their 'systems'.

Part of this is to advocate an increase in finance and funding for the sanitation and hygiene sector. In the past five years, MaS! has helped to direct over US\$2 million from government budgets to sanitation and hygiene improvements. Additionally, 44 financing mechanisms have been made available to support sanitation and hygiene products and services by this partnership. For example, colleagues in Indonesia have worked with the government agency responsible for Islamic social funds in East Lombok to commit 1 billion rupiah (approximately US\$64,000) towards the improvement and construction of toilets and sealed septic tanks that will deliver safely managed sanitation services for many poor households. In Kenya, focused advocacy has resulted in three counties signing a combined commitment of KES140 million (US\$887,000) towards county sanitation and hygiene budgets. In Nigeria, the MaS! supported the Bauchi state government to first commit and then release 49,585,000 (approximately US\$54,000) as matching funds under a pooled funds mechanism to provide toilet business owners (TBOs) with loans for business expansion and working capital so they can continue to provide household latrine construction and pit emptying services. In Ethiopia, the MaS! partnership, along with other sector partners, have continued to advocate a tax exemption (or reduction) on selected imported sanitation products, including SATO products, as well as making sanitation a defined loanable item within the national bank portfolios.

Results Area 3: Strengthening sanitation and hygiene markets through consumer finance, customer responsive products and establishing consumer demand

MaS! has helped enable over 640,000 users access sanitation as a result of financing mechanisms, resulting in nearly US\$6 million in loans facilitated to households, rightsholder groups or businesses through this partnership. For example, in India, this has meant easing links between state governments and consumer finance providers such as banks, microfinance institutions, self-help groups and civil society organizations. In Indonesia, the partnership helped develop credit schemes for households purchasing or constructing septic tanks, in partnership with a local bank, village-owned enterprises and micro-finance institutions. In Kenya, households used the innovative 'transactional ledger' banking app to formalize their previously informal 'table banking' methods, allowing them to qualify for banking loans. For example, the Gatunga Community Group in Kitui County has used the transactional ledger as a group savings mechanism, allowing participants to invest in improving their toilets while using their proceeds to save towards a community soap-making business. In Nigeria, MaS! supported TBOs to qualify as guarantors for households that wanted to take out loans from microfinance institutions to build or improve their household toilet systems. TBOs were also able to borrow from the facility to support business activities, such as obtaining stocks of SATO products to promote and sell in their communities. In Ethiopia, while continuing to advocate sanitation loans as part of the national bank loan portfolio, MaS! has partnered with FINISH Mondial to engage with local microfinance institutions and small local financial institutions, such as SACCOS, to offer sanitation loans.

The MaS! partnership has made considerable progress in making consumer-responsive sanitation and hygiene products available where they are needed. In India, where the challenge is ensuring waste from pit latrines is safely managed, focus was put on faecal sludge management for rural households, ensuring masons are trained and supplies are available for retrofitting toilets, so they have a second pit to use when the first pit fills up. In support of this, UNICEF organized a meeting for retailers to learn about SATO products and overcome supply chain issues in target geographies. In a similar vein, they supported one-stop shops for consumers to get information and enlist support on toilet improvements. Operated and managed by women's self-help groups, the clinics allow visitors to get information on toilet designs and product options, as well as a list of trusted service providers who supply a range of services, such as installation, retrofitting, cleaners, product suppliers and trainers.

Toilet business owner, Lukman Abubakar, said "these toilets are easy to install and can be ready for use quickly."



© UNICEF/JN090154/Apochi Owoicho

Toilet rims and slabs fitted with SATO pans. Toilet business owners (TBOs) are innovating and building smart toilets that are easy to install. TBO, Lukman Abubakar now makes concrete rims and slabs fitted with SATO pans used for making smart toilets in Tilden Fulani, Toro LGA Bauchi state, Nigeria.

In Indonesia, an investigation showed widespread confusion about the role of a septic tank, making them a key weakness in the safely managed sanitation chain. This led to improperly constructed septic tanks, limited demand for desludging services and low use of the treatment plant. MaS! helped improve the compliance of septic tank standards to enhance public health protection, including a consultation with local manufacturers and masons to ensure they are aware of the standards and able to adhere to them.

In Nigeria, several options of affordable household sanitation systems were made available by TBOs, including facilities for people with mobility disabilities and those living in difficult terrains. Some TBOs have become registered suppliers of SATO products, including SATO Pans, SATO Stools and SATO Taps, and some established one-stop shops to improve information and promotion of options to consumers. They also worked to improve the availability of affordable pit emptying services, as many household toilet pits are already filled, making sanitation systems temporarily unavailable. Pit emptiers were trained and equipped with the right tools and equipment to safely empty pits. The partnership worked closely with government environmental protection agencies to ensure regulated service standards were adhered to and public health was being maintained.

In Tanzania, the partnership helped to strengthen supply chains of sanitation and hygiene products, working closely with distributors and retailers. Where retailers do not yet exist, MaS! worked with local government administrations, artisans and WASH entrepreneurs to function as distributors and retailers, ensuring products were available where there was demand.

In Ethiopia, following an exchange visit by national and sub-national government stakeholders to Kitui in Kenya, MaS! has been exploring partnerships with existing last-mile structures, such as the Ministry of Women, Labor and Social Affairs and the Food Security and Productive Safety Net Programme.



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Bi. Salama Ramadhan Ameir, an esteemed Community Health Volunteer (CHV) of Pangawe District, engages in a discussion with a community member about the importance of hygiene and sanitation in the household while holding a SATO pan. CHV are the backbone of addressing healthcare challenges and bolstering community well-being across Zanzibar.

MaS! has undertaken various activities to raise consumer demand. In India, over 300,000 women members of self-help groups were reached through communication efforts to make them more aware of the various loan and sanitation products available. In Indonesia, MaS! focused on safely managed sanitation services in public places – 101 markets were surveyed, and recommendations were put forward to national and sub-national governments on public-private partnership business models that can work with the private sector to improve sanitation conditions in public markets.

MaS! worked with government stakeholders to pilot several of these PPP business models and create an implementation plan for regular desludging of public toilets in public markets. In Kenya, the installation of demonstration toilets in institutional settings and other public spaces, such as schools, health-care facilities, markets, churches and bus terminals, raised awareness of improved toilet systems, including those fitted with SATO products. And events such as Kenya Sanitation Week, Global Hand-washing Day and World Toilet Day were used to raise awareness for sanitation, hand hygiene and diarrheal disease prevention, engaging with 191,190 people in nine counties.

The same took place in Nigeria, where MaS! engaged with a local NGO called Toilet Pride, which engaged directly with communities in markets and public places and through announcement vehicles to spread the word and put sanitation at the forefront of people's minds so sales agents and TBOs can follow up by offering their services. Community leaders and Emirs instituted local by-laws that prohibit open defecation, further driving sanitation business activity.

In Tanzania, MaS! took a similar approach by raising demand through community-led total sanitation activities and supporting the supply chain of SATO and other products to reach communities. The youth and community entrepreneurs were engaged to go door-to-door selling products for a small commission.

Results Area 4: Strengthening policy and governance, data and information, and capacity development systems

MaS! worked at the systems level in all countries to support the government to deliver universal access to safely managed sanitation. In all, the partnership supported 43 national and local government policy instruments (i.e. guidelines, action plans, private sector inclusive SOPs) to strengthen delivery of sanitation and hygiene services. In India, the partnership supported the state governments of Bihar and Odisha to develop policy and strategy documents to deliver safely managed sanitation for all, including a strategy for retrofitting single pit toilets to twin pits so households can manage and treat their waste on site, municipal waste treatment plant policies and guidelines, consumer credit procedures, and hygiene strategies and roadmaps. Equally significant, the partnership supported the development of a government strategy to link rural households to urban sanitation services, dubbed the 'urban-rural convergence'. This included helping the government to set up steering committees to oversee implementation and monitoring in 30 districts and 244 blocks, issuing state-level guidance to lower levels of government on signing of memorandums of understanding between rural and urban government departments, and the digitalization of service requisitions for desludging services covering 4.7 million urban and rural households.

In Indonesia, MaS! supported the government to develop a safely managed sanitation road map, which helped to formally establish a target of 60 million Indonesians with access to safely managed sanitation services by 2030 in the government's national medium-term development plan (2025–2029). At the sub-national level, the partnership advocated greater prioritization of sanitation in the development agenda, which contributed to the issuance of nine local regulations on desludging of septic tanks and standard operating procedures that can be enforced. In one city, the mayor instituted a sanitation tariff that will be used to fund desludging services for all residents, while engaging with septic tank manufacturers to ensure products adhere to official standards and procedures and public health is maintained. Meanwhile, the

partnership supported the establishment of an association of private desludging businesses to help formalize their operations and encourage proper disposal of waste at the treatment plant. Also unique to the Indonesia programme, MaS! supported the development of a mobile and web one-stop shop platform that connects businesses and households with a full range of approved products and services needed to deliver safely managed sanitation, including payment options and data collection features. The platform, which has the potential to serve 6 million people, is tailored by each district to suit their local context and is operated and maintained by a relevant local institution, based on mutual agreement.

In Kenya, MaS! supported the approval, launch and dissemination of the Rural Sanitation and Hygiene Protocol, implementation guidelines and monitoring framework, and the Costed Kenya Rural Sanitation and Hygiene Roadmap 2023–2030. In Nigeria, the partnership supported the Bauchi state government to develop and issue guidelines for the safe removal, transportation and disposal of faecal sludge from toilets. In Tanzania, the partnership supported the government to develop and finalize regional and district strategies to attain open-defecation-free status, while supporting the development of the third phase of the national sanitation campaign. In Ethiopia, the partnership was successful in advocating safely managed sanitation being included in the Total Sanitation to End Open Defecation and Urination Ethiopia 2030 campaign, led by the Prime Minister's office, and a national SMS protocol has been drafted with clear indicators and steps for implementation.

Strengthening data and information systems is crucial if governments are to build trust through information exchanges for decision making, incentivization and accountability. In all, the partnership established or strengthened 21 data and information systems for the sanitation and hygiene sector. In India, this meant the creation of a web and mobile application to map and monitor the sanitation status of over 200,000 households in Bihar, improving management information for advocacy and decision making. In Indonesia, this has meant merging existing local government databases with the one-stop shop platform to ensure pre-existing data are used. This required long and often intense discussions with both central and local governments to come to a common understanding on sanitation indicators for monitoring and their definitions. In Kenya, the partnership supported the establishment and training of seven county sanitation monitoring hubs to support a national roll-out of an enhanced national sanitation and hygiene real-time monitoring system. In Nigeria, the partnership supported government partners to collect relevant data, update the WASH Information Management System and meet regularly to review targets against progress. The WASH Information Management System has enabled partners to effectively monitor sanitation improvement programmes, address issues and plan future investments to close gaps in coverage. MaS! supported similar interventions to strengthen national monitoring systems in Tanzania and Ethiopia.

MaS! also focused on building inclusive human and institutional capacities, resulting in 738,517 stakeholders receiving training to support monitoring, implementation or design of SMS systems. This took various forms. The partnership in India trained self-help group members on financing for sanitation investments, expert trainers to train masons in retrofitting toilets, sanitation workers in setting up and operating solid and liquid waste management units, plus many government stakeholders at state, district, block, urban local body and Gram Panchayat levels. In Indonesia, it was training of manufacturers and construction businesses on meeting safely managed sanitation standards, the setting up of a mentorship programme between desludging businesses in Bekasi City and Lumajang district, and organizing field visits for city authorities to learn from each other. Similarly, in Kenya, public health officers, community health promoters, artisans and youths were trained on sanitation marketing, monitoring, implementation and design of SMS systems. And in Nigeria, the partnership provided training and on-the-job mentoring for state task groups on sanitation and stakeholders of the rural water supply and sanitation agencies, who in turn cascade what they learned to lower levels of government and community structures.

Looking back: How has MaS! contributed to strengthened sanitation markets?

After five years of implementing the MaS! partnership, LIXIL and UNICEF want to document the different market-based sanitation⁹ approaches in each country and draw out the lessons learned about sanitation market development across the partnership. The overall research question guiding this exercise was: ‘How has MaS! contributed to strengthened sanitation markets?’

The analytical framework employed to answer the question is based on the market development approach.¹⁰ A market development approach explicitly considers factors beyond supply and demand that affect how, in this case, a sanitation market works. Rather than address other factors such as finance, information or rules directly, such approaches aim to stimulate changes in the behaviours of private, public and civil society actors performing key market functions (i.e. marketing/promotion, finance, policies) that enable the ongoing provision of sanitation goods and services. Lastly, this approach considers the roles of not just sanitation enterprises, but also the important roles that public and civil society organizations may play in contributing to sustained provision of sanitation goods and services. A sanitation market can be considered to have been strengthened when one or more of the functions necessary for ongoing service delivery have been improved. A generic theory of change for this approach is shown in Figure 2 and forms the overarching approach to the assessment, which sought to understand which sanitation market functions were important to address in each context and how they have been addressed through the MaS! partnership.

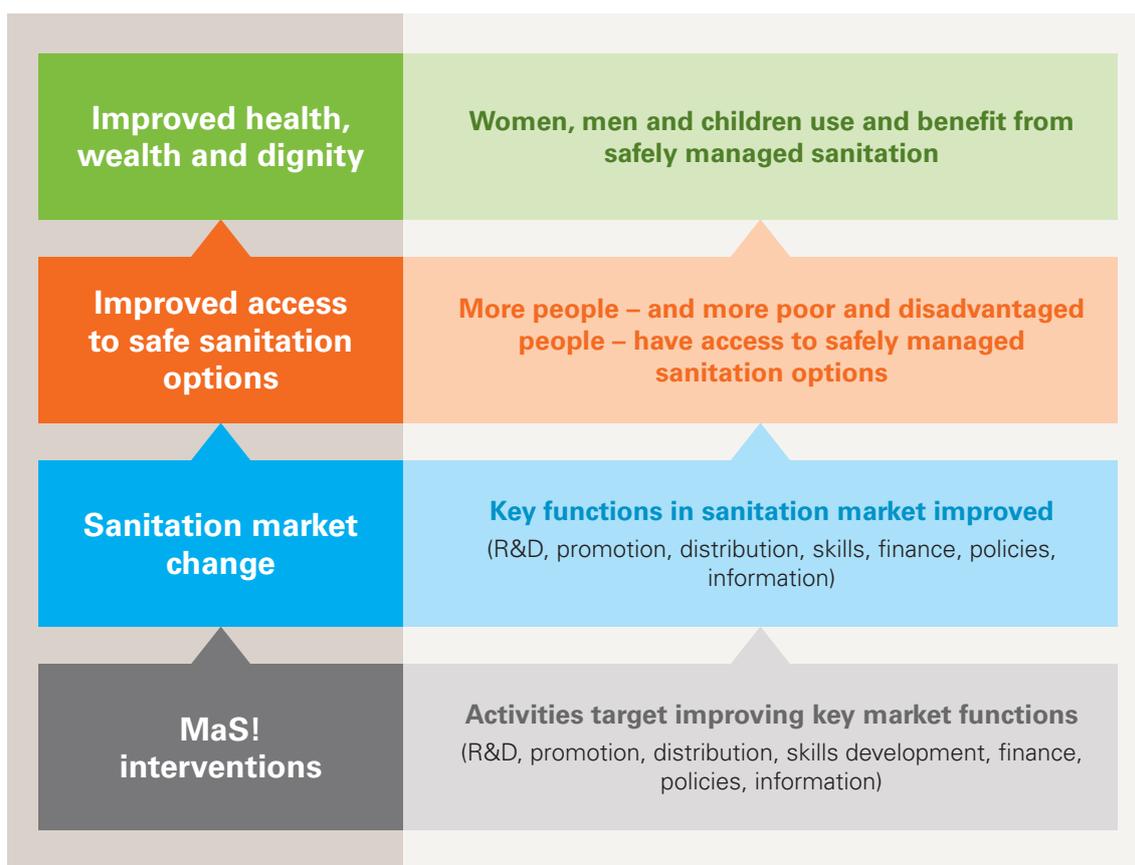


Figure 2: Theory of change for sanitation market development

⁹ UNICEF defines market-based sanitation as “an approach to improve sanitation in a country by building the sanitation market of goods and services for which the customer makes a full or partial monetary contribution (with savings and/or cash equivalents) towards the purchase, construction, upgrade, and/or maintenance of their toilet from the private sector.”

¹⁰ The Springfield Centre, The Operational Guide for the Making Markets Work for the Poor (M4P) Approach, 2nd edition funded by SDC and DFID, 2014. Accessed here on 1 January 2024.

To understand the different approaches to sanitation market strengthening taken across six countries, an analytical framework was developed to distil the customer, approach and key functions prioritized and addressed through the MaS! partnership (see Figure 3).

The methodology used included a document review (e.g. partnership reports, monitoring data, presentations, memorandums of understanding, etc.) and semi-structured key informant interviews with LIXIL and UNICEF staff involved in implementing the partnership in each country and managing the partnership at regional and headquarter levels. Information presented covers the period 2018–2022, so it may omit key activities undertaken in 2023 and reflects only the experience and perceptions of LIXIL and UNICEF staff during that time.

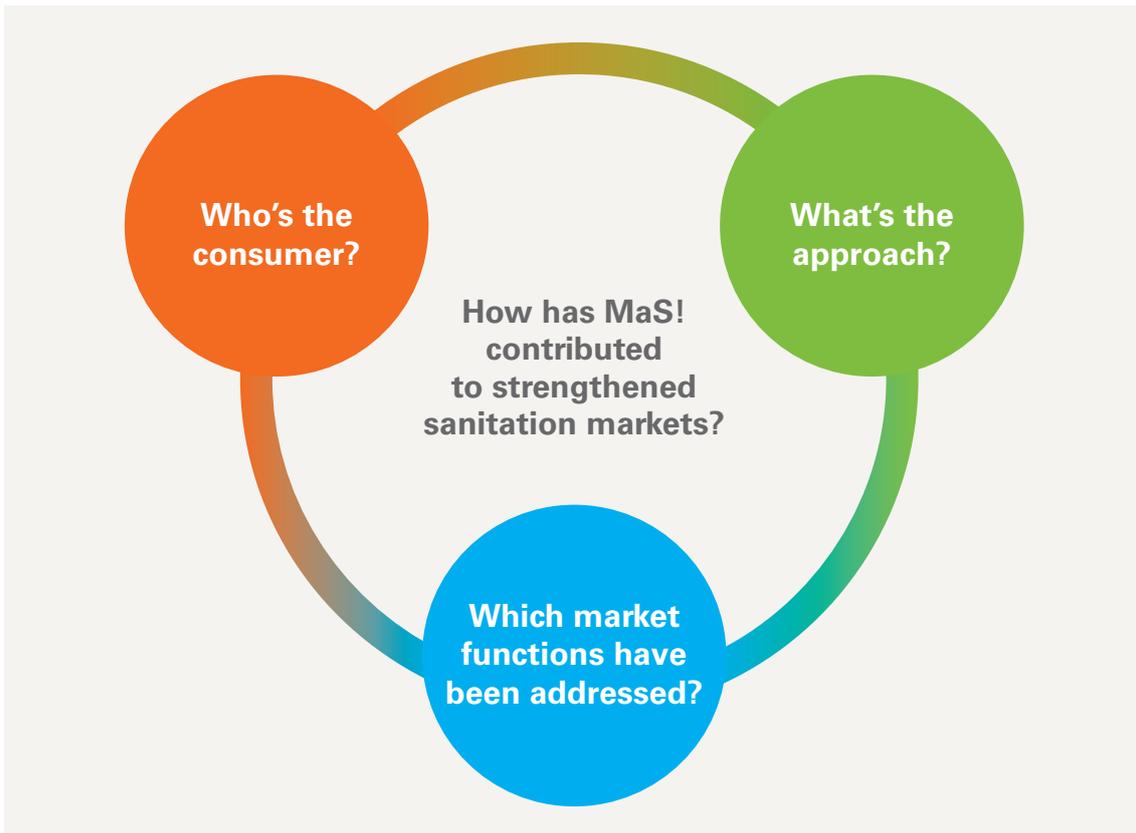


Figure 3: Analytical framework employed to distil approaches in each country

Country approaches to strengthen sanitation markets



The maps on the country pages within this section are stylized and not to scale. They do not reflect a position by UNICEF on the legal status of any country, or area, or the delamination of any frontiers.

Ethiopia



Country results



Sanitation

836,100

people gained access to at least basic sanitation through SATO and other products (472,680 through a new subsidy and 363,420 through market-based sanitation), including an estimated 300,000 who gained access to safely managed sanitation.



Policies

9

national and local government policy instruments were supported by UNICEF.



Finance

6

financing mechanisms or products were made available to consumers through this partnership.



SATO sales

72,684

SATO Pans were sold.



Hygiene

150,000

people gained access to basic hand hygiene.

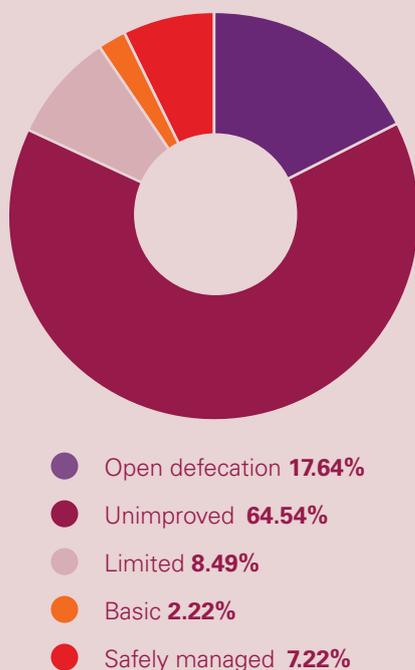


© UNICEF Ethiopia/2023/Demissaw Bizuwork

“It’s been three months since I started using the SATO pan. It doesn’t smell, there are no flies, and I am no longer afraid to send my children to use the toilet,” says Misra Mohammed Abdi. Misra is happy with the change she sees in the community. With the help of health workers, the community in the Kassa Oromia and Awdal kebeles (sub-districts) of the Oromia region has successfully become open defecation-free (ODF).

Background and market assessment summary

Figure 4: Household sanitation service levels in Ethiopia – 2022



Ethiopia was selected as one of the first three MaS! partnership countries in 2018. As the second largest African country with a population of 123 million people,¹¹ Ethiopia has reduced open defecation considerably since 2000, resulting in most people having access to an unimproved¹² toilet (see Figure 4).¹³ The key sanitation challenge in Ethiopia is supporting people to move from an unimproved toilet (i.e. one that does not have a slab or covered drop hole) to safely managed sanitation, which protects human and environmental health.

Market analysis¹⁴ conducted in 2019 confirmed progress towards reducing open defecation has been impressive, but moving people beyond access to unimproved sanitation facilities has been a challenge despite a well-developed network of health extension workers. In rural areas, most households built a pit toilet with their own resources but reported dissatisfaction with odours from uncovered pits and worry about small children using the toilet. People further reported a willingness to build upon investments already made in their facilities, but they are constrained by limited affordable options available locally and liquidity at certain times of the year.

The supply side of sanitation goods and services can be summarized as limited product choice, marketing and aggregation, particularly in rural areas. The suppliers that do exist, such as wholesalers, pan and slab producers and manufacturers of other components, operate independently of each other and exhibit minimal coordination.

Ethiopia is unique among the MaS! partnership countries in its barriers to import and restrictive foreign direct investment policies, both of which have discouraged the entry of new products and new domestic manufacturers. Further supply-side growth is thus constrained by the high cost of importing raw materials, which can triple the price of imported goods and restrictions on access to foreign currency and repatriation of profits

© UNICEF Ethiopia/2023/Demisew Bizuwork



The key sanitation challenge in Ethiopia is supporting people to move from an unimproved toilet to safely managed sanitation.

Abduraman Kebede in his sanitation shop, which sells SATO pans, sanitary pads, soap, and other WASH supplies for the community.

11 Population, total | Data (worldbank.org).

12 The WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) defines an unimproved toilet as one without a slab or platform, hanging latrines or bucket latrines.

13 JMP (washdata.org).

14 Aguaconsult, Sanitation market analysis in Kenya, Tanzania and Ethiopia, 2019. Unpublished.

Sanitation market system strengthening in Ethiopia

Table 2 summarizes the findings from the analysis, including who the consumer is, what the approach is and which market functions have been addressed.

Who is the consumer?	Rural households with an unimproved toilet.
What is the approach?	Rural supply chain strengthening.
Which market functions have been addressed?	<p>Skills – Rural sanitation businesses have received training on how to manufacture concrete slabs and install SATO Pans and how to operate a sanitation business.</p> <p>Promotion – Training has been provided to rural businesses and health extension workers on how to market sanitation effectively.</p> <p>Finance – Seed stocking for rural sanitation businesses and inclusion of sanitation in existing public subsidy programme.</p> <p>Advocacy – Persuading the government to consider tax exemptions for sanitation products and for sanitation to be designated a priority lending sector.</p>

Table 2: Summary of sanitation market system strengthening in Ethiopia

The MaS! partnership in Ethiopia’s approach can be described as rural supply chain strengthening. In practice, this has meant working on a variety of market functions so rural businesses can supply a wider range of products to rural consumers.

- **Technical and business management skills for sanitation businesses.** Over the past five years, the MaS! partnership has worked with local government authorities, existing public training institutes and other development partners to identify and support new or existing businesses to improve their abilities to manufacture and market their products – 448 people associated with over 80 sanitation businesses throughout the country have received such training.
- **Promotion of safe sanitation options.** In addition to the training provided to rural sanitation businesses, health extension workers – a key source of general health information for rural populations – received training and information on how to promote safe sanitation options. Furthermore, LIXIL continues to conduct marketing and awareness raising sessions to complement the marketing efforts of businesses and health extension workers.

- **Finance – Supply chain financing and inclusion of sanitation for existing public subsidy recipients.** Working capital remains a constraint for rural businesses, and this is exacerbated by the high cost of importing affordable sanitation solutions such as the SATO Pan. Seed stock of SATO Pans has been provided to rural businesses as current import restrictions have rendered development of a commercial supply chain challenging. In addition, the MaS! partnership supported the Government of Ethiopia to implement an updated sanitation subsidy protocol, which led to the inclusion of SATO Pans in an existing government subsidy programme for poor urban households.
- **Advocacy for tax exemption and recognition of sanitation as a priority lending sector.** Reducing the costs of sanitation products and stimulating greater investment by the financial sector are expected to lead to greater investment in safe sanitation by households. Thus, a key area of work over the past three years has been to build the evidence base for reduced taxes on imported sanitation goods and to advocate ministerial recognition of sanitation as a priority lending sector, which is expected to lead to greater investment by the financial services sector.

India



Country key results



Sanitation

1,570,948

people gained access to at least basic sanitation indirectly through strategic interventions with Bihar and Odisha governments, including 1,291,662 who gained access to safely managed sanitation.



Policies

12

state government policy instruments were supported by UNICEF.



Hygiene

1,429,590

people gained access to basic hand hygiene.



Micro-loans

US\$2,940,000

was lent to 118,153 customers.



Government funding leveraged

US\$816,460

from state governments for capacity building and incentives for local groups.

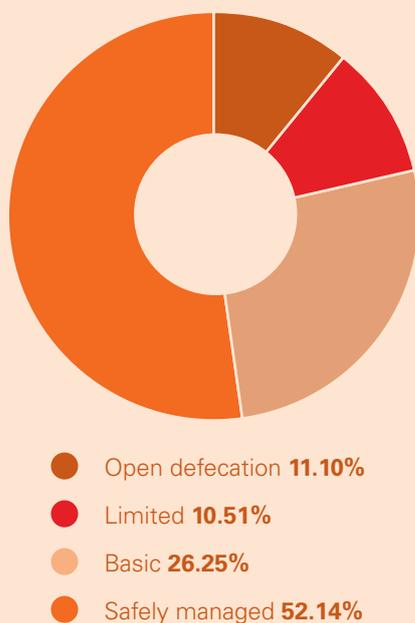


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Children at the Dr. Isac Santara Balniketan centre in Sambalpur, Odisha, India, are washing their hands in the presence of a LIXIL representative.

Background and market assessment summary

Figure 5: Household sanitation service levels in India – 2022



India was added to the MaS! partnership in the second phase. By far the largest country in the MaS! partnership with a population of 1.4 billion people, India made impressive gains in ending open defecation under the Swachh Bharat Mission (SBM), a national government-led sanitation initiative from 2014 to 2019 (see Figure 4).¹⁵ Although regional differences persist, the current sanitation challenge in India can be summed up as converting single pit toilets to twin pits to enable the safe management of wastes on site.

Data from 2019¹⁶ showed that 180 million rural households in India have toilets that are not connected to a sewerage system. Of those 180 million facilities, 27 per cent are twin pit toilets that can manage faecal sludge onsite by using a second pit when the first one fills; 26 per cent are connected to septic tanks that require emptying, transportation and final treatment of faecal sludge off site; and 47 per cent are single pit toilets that need to be emptied and managed offsite, which implies significant investment and operational costs, or converted to twin pits to enable onsite management.

Supply chains for sanitation goods and services are generally well developed, and a wide range of products can be found throughout the country. Although the first phase of the government sanitation initiative included a financial incentive for households to construct a toilet, the second phase does not include additional household subsidies, as the focus is more on households to repair or retrofit a single pit to a twin pit toilet. Alternative sources of financing will be important to identify and direct towards sanitation.

© UNICEF/India/2023



Supply chains for sanitation goods and services are generally well developed, and a wide range of products can be found throughout the country.

Jayanti Andhua, a female mason from Katurabadi village, receiving retrofitting training in her village, located near the Niladungri Panchayat in Sambalpur, Odisha, India.

¹⁵ JMP (washdata.org).

¹⁶ A separate market assessment was not conducted for India, but MaS! program programme documents provide a succinct overview of the situation.

Sanitation market system strengthening in India

Table 3 summarizes the findings from the analysis including who the consumer is, what the approach is and which market functions have been addressed.

Who is the consumer?	Rural households in Bihar and Odisha states needing to repair or retrofit a single pit toilet to a twin pit toilet.
What is the approach?	Supporting government retrofitting campaigns.
Which market functions have been addressed?	<p>Research and development – Consumer feedback into new and existing sanitation products.</p> <p>Promotion – Contribution to public awareness campaigns, testing ‘toilet clinics’ and working with financial institutions and self-help groups to share information.</p> <p>Finance – Leveraging existing public sources of funding and microfinance institutions to lend for toilet upgrading.</p> <p>Skills – Masons have received technical training on how to convert single pits, and government officials have received training on how to design, manage and monitor faecal sludge management (FSM) initiatives.</p> <p>Policy – State-level support to develop new policies specific to faecal sludge management.</p> <p>Advocacy – Persuading the state and local level governments to prioritise retrofitting.</p>

Table 3: Summary of sanitation market system strengthening in India



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Establishing a cohort of skilled masons dedicated to providing WASH services wherever community needs arise.

The MaS! partnership in India targets consumers in need of repairing or retrofitting a single pit toilet to a twin pit toilet in 13 districts in the states of Odisha and Bihar. The second phase of government-led Swachh Bharat Mission (SBM 2) is focused on sustained use of toilets and faecal sludge management, and thus, the MaS! partnership approach in India can be described as supporting the government retrofitting campaign. To do this, several key market functions have been targeted.

- **Research and development grounded in user experience.** Collaboration between LIXIL and UNICEF in India led to important product design modification to respond to customer preferences by adding footrests to the existing SATO Pan product.
- **Promotion of toilet retrofitting.** Providing information on why and how a second pit is needed has meant working with various institutions in India. This has included contributions to public awareness campaigns, testing 'toilet clinics' in Bihar – which are one-stop shops for information on why and how to add a second pit, toilet components and construction services – and working with financial institutions and self-help groups to persuade consumers to upgrade their toilets.
- **Finance for toilet retrofitting.** Given the SBM 2 programme does not include a similar household incentive payment, households are responsible for financing

upgrades and second pits. MaS! has persuaded an existing government programme for women's livelihoods to lend to self-help groups for sanitation in Odisha. In Bihar, the programme worked with microfinance institutions to provide information and finance for toilet upgrades.

- **Skills to adapt single pits and to manage FSM initiatives.** Converting single pits to twin pits requires upskilling and even more so if using new products unfamiliar to masons. As part of the government retrofitting campaign, masons have received technical training on how to convert single pits to twin pits. In addition, as the shift from ending open defecation under SBM 1 to ensuring safely managed sanitation under SBM 2 is underway, government officials at various levels of state government have been trained on how to design, manage and monitor FSM initiatives.
- **Policies in place to support FSM.** With the shift in focus from ending open defecation to safely managed sanitation, state government partners in Odisha and Bihar were supported to develop key sector documents to enable safely managed sanitation. This included a financing and retrofitting strategy in Odisha, as well as a state level safely managed sanitation strategy, hand hygiene strategy and faecal sludge management policy brief in Bihar.

**The MaS!
partnership in India
targets consumers
in need of repairing
and retrofitting a
single pit toilet to
a twin pit toilet.**



© UNICEF/India/2023

Indonesia



Country key results



Sanitation

442,876

people gained access to at least basic sanitation at both households and in public places, including 318,950 who gained access to safely managed sanitation.



Policies

11

national and local government policy instruments were supported by UNICEF.



Products

12

consumer-driven sanitation and hygiene products were made accessible by this partnership.



Finance

6

financing mechanisms or products were made accessible by this partnership, 321 users were able to access them, and a total of US\$10,000 was disbursed.



Data

7

Seven data and information systems were strengthened.



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Sanitary workers from UPT PALD (Unit Pelaksana Teknis Pengelolaan Air Limbah Domestik) and IPLT (Instalasi Pengolah Lumpur Tinja) Lumajang, pose in front of a fecal sludge truck.

Background and market assessment summary

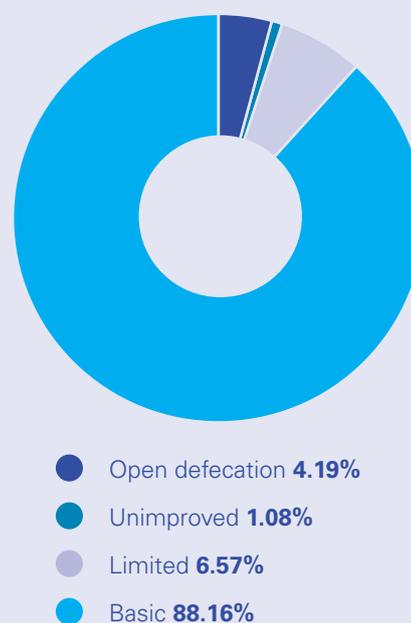
Indonesia joined the MaS! partnership in the second phase. With a population of 275 million people, its primary sanitation challenge is to ensure the safe management of faecal sludge, as nearly 90 per cent of people are classified as having basic sanitation¹⁷ (see Figure 6).¹⁸

Market analysis was conducted in seven regions of Indonesia in 2020.¹⁹ Although important regional variations were documented, there were several consistent findings that have informed the MaS! approach in Indonesia. For example, across income levels, most people own and use a toilet and septic tank and express high levels of satisfaction with both. However, only 12.5 per cent of households surveyed in the analysis using septic tanks have emptied the septage and most households believe that their septic tank does not require emptying due to a misperception of what 'safe' sanitation means. Households prioritize price, comfort and cleanliness when building a toilet and septic tank, not preventive maintenance, pollution prevention or regulatory compliance.

No public, private or community group was reported to be providing correct and actionable information on what safe sanitation is and how and why a household could comply with it. And although the assessment mentions the potential of financial institutions developing specific lending products for safe sanitation, there appeared to be limited involvement of the financial sector to date.

Constructing a toilet and septic tank is not perceived to be difficult as the products and services needed are mostly available throughout the country. Builders and suppliers of construction inputs such as concrete rings, however, have an incorrect perception of what constitutes a safe septic tank. They are under the impression that a good septic tank is the one that does not need to be regularly emptied, leading to many being built without a sealed and watertight bottom, contributing to environmental pollution, limited pit emptying and lack of compliance with the National Indonesian Standard for septic tanks. The problem is not necessarily with the technical capabilities of masons, contractors, producers and service providers, but more in their lack of understanding of access to safely managed sanitation

Figure 6: Household sanitation service levels in Indonesia – 2022



and its required specifications. Although both public and private pit emptying service providers appear to exist in most localities, there is limited coordination among businesses that provide construction services and those that offer emptying services.

Many cities and districts already have regulations that require households to use standardized septic tanks and conduct regular pit emptying, in addition to requiring pit emptying service providers to be licensed and dispose of waste at a treatment plant. To date, these have yet to be implemented as compliance strategies to persuade households to construct tanks that comply with national standards and ensure their tanks are regularly emptied. And if pit emptying tariffs do exist, they are not based on full cost recovery, but simply determined by local government regulations.

¹⁷ JMP figures differ from Indonesia's Central Bureau of Statistics, which reported in 2018 that 74.5 per cent of Indonesians have access to improved sanitation. Additional data from the National Development Planning Agency states that 74 per cent of the population has access to safely managed sanitation and 9.4 per cent still practice open defecation.

¹⁸ JMP (washdata.org).

¹⁹ The Nielsen company Indonesia, Market assessment of safely managed sanitation in Indonesia, 2019. Unpublished.

Sanitation market system strengthening in Indonesia

Table 4 summarizes the findings from the analysis including who the consumer is, what the approach is and which market functions have been addressed.

Who is the consumer?	Urban or peri-urban households with non-compliant septic tank or in need of emptying services.
What is the approach?	Bundling safely managed sanitation services into a digital platform.
Which market functions have been addressed?	<p>Information on what constitutes a safe, compliant septic tank for private companies, including individual sanitation entrepreneurs.</p> <p>Promotion of safe sanitation options by public health workers and sales agents.</p> <p>Finance – New financial product development and digital payment options including use of a digital platform.</p> <p>Regulation – Local government regulations on domestic wastewater management and desludging tariffs.</p> <p>Monitoring – Using the digital platform to register where compliant products have been installed and when pit emptying occurs.</p>

Table 4: Summary of sanitation market system strengthening in Indonesia



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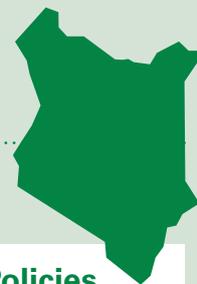
A worker installs a toilet in Wonokerto Village, Lumajang, East Java.

Based on the overall sanitation situation and the findings from the market assessment, the MaS! partnership in Indonesia targets urban or peri-urban households in five regions of Indonesia (Bekasi, East Lombok, Lumajang, Semarang and West Sumbawa) with faecal sludge management challenges. It does this by developing a digital platform that bundles safely managed sanitation services provided by a range of private and public actors, including septic tank suppliers, builders, pit emptiers, financial institutions, public health workers and local government officials.

At the time of analysis, the digital platform was still under development, but several key market functions have been addressed by the MaS! partnership to date.

- **Information on safely managed sanitation for private enterprises – how to comply with government standards.** Given the pervasive misunderstanding of what safe sanitation is and how to achieve it, an important first function to address was to provide information to septic tank manufacturers on current Indonesian government standards for complying with safe sanitation and the implications for their product offering to households. The MaS! partnership provided this information to manufacturers, resulting in the local government in Bekasi certifying these suppliers as government compliant, thus facilitating their participation in the digital platform.
- **Regulations for safe sanitation.** To operationalize the platform, another key function addressed by the partnership has been local government wastewater regulations. Progress in Bekasi, Lumajang and West Sumbawa has resulted in the completion of the local government's wastewater regulations and updated desludging tariff calculations, both important inputs to shift consumer behaviour towards safely managed sanitation.
- Promotion of safe sanitation options to households. The limited understanding of Indonesian consumers of safe sanitation and how to achieve it will require a sustained promotional effort by both public health promoters and private companies' sales agents. As revealed by the market analysis, increased knowledge on safe sanitation must be accompanied by informed sanitation options available to households to ensure demand creation for safe sanitation. The digital platform offers a vehicle for sales agents to provide relevant information to potential consumers.
- **Finance for compliant septic tank construction.** Upgrading an existing, non-compliant septic tank to one that meets Indonesian standards will require household investment. At least four banks and village-owned enterprises have developed a customized lending product for such upgrades and is included in the digital platform. Additionally, the platform offers potential customers the ability to pay digitally, potentially reducing transaction costs and increasing customer convenience. The lending is also available for local sanitation entrepreneurs to enlarge their businesses.
- **Monitoring of safely managed sanitation.** The lack of reliable information at local government level on safely managed sanitation limits the ability to plan investments and measure progress. The digital platform is expected to provide useful data to government authorities on locations of government-compliant septic tanks as well as pit emptying services.

Kenya



Country results



Sanitation

558,050

people gained access to at least basic sanitation in seven counties through this partnership, including 461,986 who gained access to safely managed sanitation.



Policies

9

national and local government policy instruments were supported by UNICEF.



SATO sales

111,610

SATO products have been bought and installed since 2018 through this partnership.



Schools

9,500

At least schoolchildren in 56 schools in six counties have access to safe toilets in a learning environment provided by The School Toilet Enhancement Programme.



Budget

US\$919,141

national or local government budget was allocated to sanitation and hygiene improvement actions, with support from this partnership.



Hygiene

207,682

or more people gained access to basic hand hygiene.



Finance

7

financing mechanisms or products were made accessible by this partnership, granting access to 4,287 people, and a total of US\$307,215 in loans were disbursed.

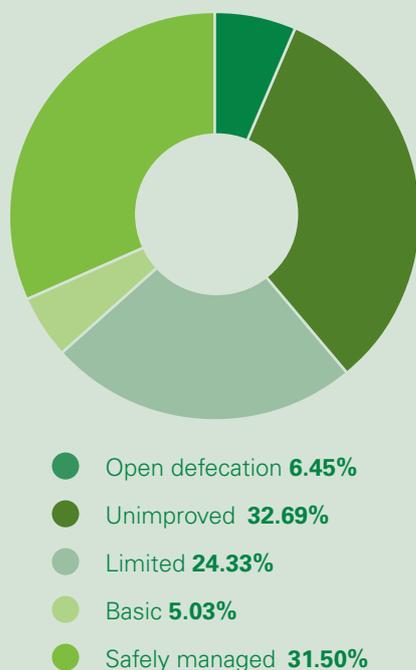


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Jane Munguti, a teacher and health club matron, talks to students about safe sanitation in Kyuso Primary, Kitui County, Kenya.

Background and market assessment summary

Figure 7: Household sanitation service levels in Kenya – 2022



Collaboration in Kenya between LIXIL and UNICEF in 2015 provided the initial impetus to formalize and expand the collaboration under the MaS! partnership in 2018. With a population of just over 54 million people, Kenya's has progressed considerably on ending open defecation. Current challenges remain in reaching the remaining populations practicing open defecation as well as upgrading unimproved toilets to safely managed ones (see Figure 6).

The 2019 market assessment²⁰ confirmed that solid progress has been made towards ending open defecation, but regional disparities persist: 17 counties have less than 1 per cent of their population practicing open defecation, while 11 counties still have 20 per cent doing so. Households expressed dissatisfaction with slabs that are difficult to clean and holes that are uncovered and pose a risk to small children using the toilet. Even in rural areas, people are brand conscious and willing to invest in items that improve the quality of their home. Rural households still depend heavily on agricultural income and thus, the purchasing power and willingness to pay of rural populations peaks at the end of the calendar year following the harvest season.

The market assessment found that a variety of hardware products, at a range of prices, is available. Particularly in rural areas, however, inconsistency, unreliability and small margins throughout the supply chain are key barriers to products reaching end consumers. Even when products are available in retail outlets in towns, reaching rural consumers with effective last-mile distribution strategies remains a challenge.

Although Kenya has one of the highest rates of financial inclusion in the world, there has been limited involvement of the financial sector in developing lending products for either sanitation businesses or consumers. Several barriers persist that prevent households accessing finance for sanitation improvements, including a lack of knowledge and familiarity with sanitation products and services by banking institutions and limited access of banks to lending capital for non-income generating sectors.

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558,050 people gained access to at least basic sanitation in seven counties through this partnership.

A rehabilitated and upgraded school toilet facility at Kyuso Primary, Kitui County, Kenya.

20 Aguaconsult, Sanitation market analysis in Kenya, Tanzania and Ethiopia, 2019. Unpublished.

Sanitation market system strengthening in Indonesia

Table 5 summarizes the findings from the analysis including who the consumer is, what the approach is and which market functions have been addressed.

Who is the consumer?	Rural first-time toilet users or upgraders located in eight counties.
What is the approach?	Professionalization of community health promoters as advocates.
Which market functions have been addressed?	<p>Promotion – A strategic blend of above the line marketing efforts and below the line, face-to-face promotion using existing public health promoters.</p> <p>Skills – Construction and marketing skills for masons and business management for community health promoters.</p> <p>Finance – Seed stocking of SATO products for sanitation enterprises as well as the development of various products and services from financial institutions.</p> <p>Policy – The passage of a county level bill enables the payment of a monthly stipend to community health promoters who engage in sanitation promotion work.</p>

Table 5: Summary of sanitation market system strengthening in Kenya



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Women from a local women's group discuss SATO products in Kitui County, Kenya.

Successful collaboration between UNICEF and LIXIL in 2015 in Kitui County in introducing the SATO Pan contributed to the formalization and expansion of the partnership three years later. Phase I of the partnership focused on rural households purchasing their first toilet or upgrading one in Kitui and Siaya counties. As time went on, MaS! expanded to a further six counties and was present in eight counties at the time of analysis.

The main approach to sanitation market development is through professionalization of community health promoters to promote and distribute safe sanitation solutions. CHPs are present in most communities, and many have experience promoting community-led total sanitation in Kenya. By professionalizing their services through skills building, links to suppliers and masons and access to finance through seed stock and other financial services, they provide a key link in rural supply chains. To effectively implement this approach, the MaS! partnership has targeted several key functions in the Kenya sanitation market.

- **Above and below the line marketing and promotion.** The Kenya partnership reports combining above the line, or mass media marketing, with below the line, or targeted face-to-face sales tactics. These efforts are then complemented by face-to-face sales visits by CHPs, who report that it takes an average of three or four visits to convince a household to purchase a safe sanitation solution.
- **Construction and business management skills for CHPs and masons.** Both CHPs and masons have received information and training on how to market sanitation products, install SATO products (including Pans, Stools, Flex, V-Trap and I-Trap) effectively, and promote their services.
- **Last-mile distribution agents.** CHPs not only promote safe sanitation solutions, but also function as last-mile distribution agents through two modalities. The first model leverages their practices of household door-to-door visits to include safe sanitation promotion in those visits, whereas a second model being trialled aggregates all the products needed to install a complete sanitation solution into a one-stop shop in dispersed rural areas.
- **Seed stock and other financial services for sanitation businesses.** CHPs were provided with initial working capital (typically 50 SATO Pans) to jump-start their promotional and sales efforts. Beyond this, however, the partnership collaborated with other partners to introduce innovations to increase the bankability of CHPs by digitizing their financial records and to create new lending products for sanitation enterprises.
- **County policy changes to enable payment for CHPs.** CHPs make a small commission on sales of sanitation products, but they incur considerable costs in terms of their time and transportation in promoting safe sanitation. MaS! effectively contributed to a policy change in Kitui County to enable CHPs to receive a stipend from the government for their work promoting sanitation. This has been replicated in other counties through County Community Health Bills.

Nigeria



Country results



Sanitation

617,821

people gained access to at least basic sanitation, including 381,513 who gained access to safely managed sanitation.



Policies

2

national and local government policy instruments were supported by UNICEF.



SATO sales

6,301

SATO products have been bought and installed since 2018 through this partnership.



Hygiene

462,475

people gained access to basic hand hygiene.



Budget

US\$85,310

national or local government budget was allocated to sanitation and hygiene improvement actions, with support from this partnership.



Finance

5

financing mechanisms or products were made accessible by this partnership, 12,989 users were able to access them, and a total of US\$945,769 in loans were disbursed.

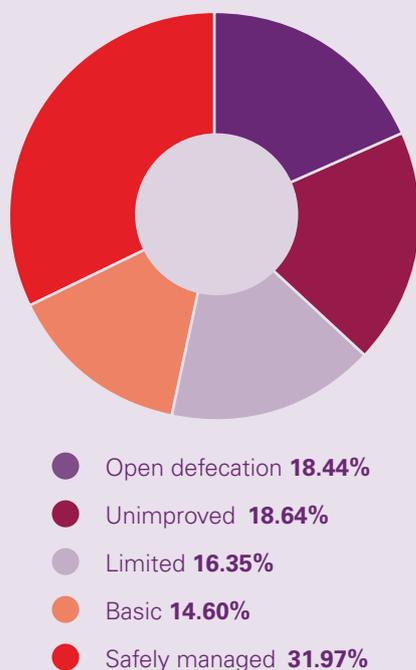


© UNICEF/UN0854613/Owoicho

Volunteer Hygiene Promoters teaching community members good hygiene and sanitation in Nigeria.

Background and market assessment summary

Figure 8: Household sanitation service levels in Nigeria – 2022



Nigeria is home to over 218 million people and joined the MaS! partnership in the second phase. Sanitation challenges include ending open defecation of nearly 40 million Nigerians, as well as upgrading toilets for an additional 80 million who currently have unimproved or limited access (see Figure 8).

A 2019 market analysis in Nigeria²¹ found that consumer preference for open defecation remains relatively high and that even when communities have been triggered through community-led total sanitation processes, the risk of reverting to open defecation remains if poor quality toilets are built. Yet, the analysis confirms that if preferences for high-quality toilets can be created through promotion and marketing, coupled with access to finance, consumers will invest in improving their toilets. At the time of analysis, the most common way to finance a toilet in Nigeria was through using a Village Savings and Loan Association or a loan from a microfinance institution, although this practice did not appear to be widespread.

Supply chain analysis in Nigeria focused on the challenges manufacturers, importers, builders and toilet business owners face. Availability of construction materials, not just toilet components, appeared to be an issue for builders. And a lack of finance for working capital, business expansion or investment was reported to limit the growth of smaller businesses engaged in the sanitation sector.

The approach in Nigeria is best described as supporting toilet business owners to provide sanitation goods and services.



© UNICEF/UN0854613/Owoicho

Abubakar, a WASHCOM member who lost his wife and son to during the cholera outbreak in his community.

21 Oxford Policy Management, Sanitation market analysis in Cote d'Ivoire, Ghana, and Nigeria, 2019. Unpublished.

Sanitation market system strengthening in Nigeria

Table 6 summarizes the findings from the analysis including who the consumer is, what the approach is and which market functions have been addressed.

Who is the consumer?	Rural households with no toilet or an unimproved toilet.
What is the approach?	Supporting toilet business owners to provide sanitation goods and services.
Which market functions have been addressed?	<p>Promotion – Integrating specific safe sanitation solutions into existing community-led total sanitation programmes has been the main promotional tactic.</p> <p>Skills – Business management and sanitation information has been provided to toilet business owners.</p> <p>Finance – Toilet business owners have been provided seed stock of SATO products and the partnership expanded a pre-existing government-backed loan for sanitation.</p> <p>Policy – Bauchi state created the first faecal sludge management guidelines in the country.</p>

Table 6: Summary of sanitation market system strengthening in Kenya

In Nigeria, the MaS! partnership has identified rural first-time toilet users or upgraders in four local government areas in Bauchi, Benue and the Federal Capital Territory as the main consumers. The approach in Nigeria is best described as supporting toilet business owners to provide sanitation goods and services. This has been implemented through working on the following key functions.

- **Promoting specific safe sanitation options alongside community-led total sanitation triggering.** As ending open defecation remains a key sanitation challenge in Nigeria, much of the promotional efforts have focused on integrating specific safe sanitation options into existing CLTS triggering processes. These have been complemented with other marketing tactics, including road shows at public markets and events and using banners and mass media to create awareness. Lastly, religious leaders have played a key role in promoting messages about safe sanitation in Nigeria.
- **Skills for masons and government officials.** TBOs and artisans have received training on how to construct toilets and how to market their services. In addition, various government officials have been trained or re-trained in CLTS planning, implementation and monitoring.
- **Finance for toilet business owners and increased government investment.** TBOs have been provided seed stock of SATO products to partially address the financial constraints. In addition, in Bauchi, the government increased its contribution to a pre-existing fund for on-lending to two microfinance institutions for sanitation.
- **Policy changes to support faecal sludge management.** Under the partnership, Bauchi state was supported to create the first state-level FSM guidelines in Nigeria, laying the foundation for shifting from ending open defecation to safely managing sanitation.

Tanzania



Country results



Sanitation

1,935,508 people gained access to at least basic sanitation through this partnership, including 343,355 who gained access to safely managed sanitation.



Policies

2 national and local government policy instruments were supported by UNICEF.



SATO sales

69,686 SATO products have been bought and installed through this partnership.



Hygiene

1,636,682 people gained access to basic hand hygiene.



Budget

US\$340,590 national or local government budget was allocated to sanitation and hygiene improvement actions, with support from this partnership.



Finance

2 financing mechanisms or products were made accessible by this partnership, 212 users were able to access them, and a total of US\$4,906 in loans were facilitated.

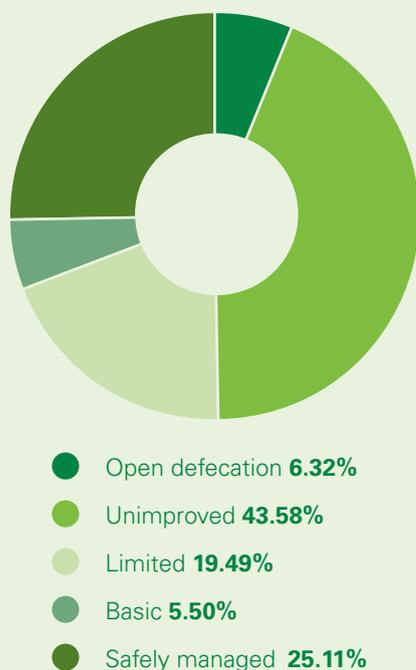


© UNICEF/UNIS398721

Salum Issa Salum and Shaib Mbawala Salum, experts in SATO Pan installations, proudly exhibit a prime example of the SATO pan, before an installation at a community member's home. Their demonstration symbolizes the concerted effort to improve community health and well-being through accessible sanitation solutions. Make a Splash! partnership in collaboration with the Zanzibar government, emphasizes a collective commitment to elevate hygiene and sanitation practices.

Background and market assessment summary

Figure 9: Household sanitation service levels in Tanzania – 2022



Tanzania, home to 65 million people, was one of the first three MaS! partnership countries. Although open defecation practices persist in some areas of the country, many areas are on track to be declared open defecation free as a result of the government’s National Sanitation Campaign. That said, considerable challenges remain in shifting from ending open defecation to ensuring safely managed sanitation for millions of people who continue to use unimproved toilets²² (see Figure 9).

A 2019 market analysis²³ revealed that although many Tanzanians across income and gender strata have and use an unimproved toilet, people value toilets that are durable, easy to clean, free from odours and hide the waste from sight. Ceramic pans have been historically popular with consumers as they offer a product that responds to many of their pain points.

Supply chain analysis identified five toilet products relatively available in the Tanzanian market and a well-developed spoke and hub distribution network that moves ceramic and plastic goods to market. Yet, the sector appears to be relatively conservative, as wholesalers and retailers are unwilling to stock products with uncertain demand and importers and manufacturers have done little to incentivize them to introduce new products.

The government’s past and current efforts to promote sanitation have contributed to increasing access, although they remain focused on ending open defecation by 2025 and have yet to address safely managed sanitation at scale. CLTS campaigns continue and are complemented by other types of public health messaging to inspire people to abandon open defecation by building and using a toilet with their own resources. Public subsidies have not been provided as part of the various government sanitation campaigns and programmes, and financial institutions appear to have limited involvement in the sector.

© UNICEF/UNI639873/



The approach to strengthening the sanitation market can be summarized as integrating safe sanitation solutions into CLTS programming.

Salum Issa Salum, an expert in SATO Pan installations, proudly exhibits a prime example of the SATO pan, before an installation at a community member’s home.

22 The JMP defines an unimproved toilet as one without a slab or platform covering the pit.

23 Aguaconsult, Sanitation market analysis in Kenya, Tanzania and Ethiopia, 2019.

Sanitation market system strengthening in Tanzania

Table 7 summarizes the findings from the analysis including who the consumer is, what the approach is and which market functions have been addressed.

Who is the consumer?	Rural or peri-urban consumers who are first time toilet users or toilet upgraders.
What is the approach?	Integrating safely managed sanitation solutions into CLTS.
Which market functions have been addressed?	<p>Promotion – Various promotional efforts have been tested over the partnership, with most effort including specific sanitation products in CLTS triggering events.</p> <p>Skills – Masons in each of the regions have been provided training on how to install SATO Pans.</p> <p>Distribution – Existing local government and community structures have been leveraged to support last-mile distribution of SATO Pans linked to CLTS triggering events.</p> <p>Finance – Seed stock has been provided to partners and one agricultural cooperative was reported to lend to its members for toilet construction.</p>

Table 7: Summary of sanitation market system strengthening in Tanzania



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Mohammed, a member of the SWASH CLUB and a disabled student at Chunga Primary School, joyously demonstrates handwashing outside the school toilet. His enthusiasm reflects the importance of inclusive and accessible hygiene facilities for all students. Mohammed’s active engagement in the SWASH clubs exemplifies his dedication to promoting cleanliness and health inclusively.

The MaS! partnership in Tanzania is focused on consumers who are first time toilet users or toilet upgraders in 14 districts of the Iringa, Mbeya, Njombe and Songwe regions, as well as of Zanzibar. Under the partnership, both UNICEF and LIXIL are supporting the Government of Tanzania's current National Sanitation Campaign to end open defecation by 2025. In Tanzania, the approach to strengthening the sanitation market can be summarized as integrating safe sanitation solutions into CLTS programming. Implementing this approach in Tanzania has meant focusing on the following key functions.

- **Promoting specific safe sanitation solutions alongside CLTS programmes.**

Over the course of the MaS! partnership in Tanzania, promotional tactics have evolved. Early promotional tactics included participation in government sanitation road shows, using sales agents to promote SATO Pans on a commission basis, and hiring local NGOs to promote sanitation. In the last year, the promotional activities have been focused on supporting the efforts of local government authorities and CLTS committees to provide information on specific sanitation products and the contact details of trained masons to install them.

- **Construction skills for installing SATO Pans.** The partnership reports training over 500 people in construction and basic business techniques to be able to

respond to demand generated by the local government CLTS programmes.

- **Last-mile distribution using existing public structures.** In Tanzania, the hardware sanitation market is fragmented with huge gaps in reaching the villages where the majority of the rural population lives, even with the hub and spoke distribution system in place. Some villages are as far as 200 kilometres from the nearest trading centre where they could access the sanitation components, which translates to a doubling or tripling of unit prices. To address these distribution challenges, the MaS! partnership recently pivoted to creating links between hardware retailers and local government authorities so that when local governments are conducting CLTS triggering events, orders for SATO products can be placed and products delivered directly to government promoters who aggregate supply and demand and serve as a last-mile distribution network.

- **Seed stock financing and testing financial products for sanitation.** The MaS! partnership in Tanzania has provided seed stock to trained masons and other partners to address working capital constraints. In addition, one agricultural cooperative was supported to lend to its members to invest in improving their sanitation facilities.



© UNICEF/UNIS39874/

Mr. Shaibu Mbalawa, a dedicated toilet contractor, demonstrates his expertise as he meticulously installs a Sato pan toilet for a resident of Pangawe, Zanzibar. Trained specifically in SATO pan installations, his work is pivotal in advancing sanitation and hygiene standards within communities. By ensuring the precise installation of these facilities, he contributes significantly to public health and hygiene enhancement efforts.

Lessons learned across the MaS! partnership

Synthesizing the approaches across countries offers reflections on common issues and practical responses to the issues in sanitation market strengthening in a variety of contexts. The MaS! partnership has learned valuable lessons about promoting sanitation using public, private and community actors, overcoming diverse market fragmentation challenges, leveraging public and private sources of funding to support sanitation markets, and identifying and advocating changes in rules to support and sustain sanitation markets.

This section offers five lessons learned over the course of the MaS! partnership.



© UNICEF Ethiopia/G8A29/21/1

Mission 2023: Hygiene and good sanitation practice in Dire Dawa, Ethiopia.

Obistu Yussuf, a health extension worker promoting social behavior change, and good hygiene practices to end the spread of cholera.

Lesson 1

Sustainable and inclusive market growth requires addressing barriers to household investment, such as a lack of supplier incentives, policy and regulatory issues, and a lack of access to finance.

UNICEF's 2020 guidance on market-based sanitation provides good reasons why development agencies choose to work on making sanitation markets work better for people.²⁴ Most sanitation improvements in lower-income countries are the result of people investing their own resources to buy a toilet of their choice from a supplier. Many sanitation markets, however, do not work well for poor consumers. Limited affordable options are available at convenient locations, and it may be hard to find skilled labour to install one. Even if the components for a desirable toilet are available, buying a toilet may not be a priority for a family due to cash flow and seasonal liquidity constraints. And local government housing or sanitation regulations may not incentivize a household to build, use or empty a toilet, even if incentives exist on paper.

The rationale for working with the private sector to supply toilets to households is strong. One of the key lessons learned across different sectors is that to make markets function effectively, inclusively and sustainably, it is often necessary to take a holistic approach to market development. For example, research into businesses serving low-income consumers found that barriers 'beyond the firm,' such as finance, regulation and information, limited the scale and sustainability of firms in many different sectors.²⁵ A synthesis of cross-sectoral initiatives that reached large numbers of low-income people, including after donor funding had ended, reported on the importance of being able to work on issues beyond individual businesses.²⁶

In the sanitation sector specifically, similar findings are emerging. One of the most comprehensive reviews of market-based sanitation initiatives to date found that the most successful interventions were those that addressed factors such as finance for consumers and enterprises, advocacy for targeted public subsidies, or policy changes and implementation of regulations, in addition to working to improve the supply of and demand for toilets.²⁷ Another similar finding from the sanitation sector comes from the Container Based Sanitation Alliance. The alliance's analysis showed that the innovative solution offered by a business model that provides a modular infrastructure and household emptying services has been slow to scale, not just because of low demand and a limited number of providers, but also due to, for example, toilet designs, transport and logistics, finance and regulations.²⁸

Early MaS! planning and reporting documents reflect an initial emphasis on building demand for toilets and ensuring products were available locally. Over time, however, the partnership evolved to complement work being done to generate demand and experiment with last-mile distribution models by working on factors such as finance, policies and regulations. For example, in 2022, over US\$2.4 million was mobilized for consumer finance across the partnership, and 14 national and local policy instruments were developed to support the provision of toilets. The remainder of the lessons learned explores each of these areas – promotion, last-mile distribution, finance, and policies and regulation in greater depth.

24 United Nations Children's Fund, *Guidance on Market-Based Sanitation*, UNICEF, New York, 2020.

25 H. Koh, Hedge, N., and Karamchandani, A., *Beyond the Pioneer: Scaling Inclusive Industries*, Deloitte Touche Tomatsu Limited, London, UK, 2014.

26 Gareth Davies, *Getting to Scale: Lessons in Reaching Scale in Private Sector Development Programmes*, Adam Smith International, 2016.

27 USAID, *Scaling Market Based Sanitation: Desk review on market based rural sanitation development programmes*, USAID Water, Sanitation, and Hygiene Partnerships and Learning for Sustainability (WASHPaLS) Project, Washington, D.C.,

28 2018. K. C. Russel, et al., *Taking Container-Based Sanitation to Scale: Opportunities and Challenges*, *Front. Environ. Sci.* 7:190. doi: 10.3389/fenvs.2019.00190, 2019.

Lesson 2

Public-private promotion – blending public health and private sales incentives – offers a smart way to create ongoing demand for sanitation.

Developing marketing or demand creation strategies that outlast short term donor-funded projects is a key challenge in strengthening sanitation markets.²⁹ It is well known that widespread use of toilets and the safe management of waste achieve public health goals. This provides the rationale for governments to invest in building demand for sanitation. Sanitation enterprises also invest in marketing and sales because they have an incentive to break even and grow in the long term. There is no one-size-fits-all model on how to create sanitation and hygiene demand but rather, whoever has an ongoing incentive and capacity to do so is a good starting point. Given there are both public health and private enterprise benefits of a household investing in a toilet or sanitation services, there is an argument to be made for a shared investment into creating awareness towards building demand.³⁰ ‘Public-private promotion’, a joint effort that leverages both public health incentives and private enterprise sales goals, is a promising approach seen in all the MaS! country contexts, albeit in different ways given the nature of the sanitation challenge in each country.

- **Ethiopia:** Publicly funded health extension workers provide public health messaging on the benefits of sanitation, which is complemented by LIXIL’s investment in above the line marketing campaigns and regional sanitation businesses’ face-to-face product promotion.
- **India:** Several actors participate in promoting the government’s retrofitting campaign in Odisha and Bihar. LIXIL, UNICEF and government partners participate in key events to raise awareness of the challenge and opportunity to retrofit toilets. Here, public financial institutions and self-help groups contribute significantly to providing information and creating demand.
- **Indonesia:** The digital platform under development offers local government health promoters, certified product suppliers, pit emptying businesses and financial institutions a single promotional platform to provide targeted messages to potential customers.
- **Kenya:** Professionalized Community health promoters offer public health messages and sanitation solutions complemented by targeted market activation activities and mass media promotions led by LIXIL.
- **Nigeria:** Toilet business owners liaise with government-led CLTS facilitators to be able to offer their products and services once triggering events have occurred to offer timely solutions when sanitation issues are most salient to people.
- **Tanzania:** Local government CLTS facilitators and other officials collaborate with retailers to be able to provide information and products following government-sponsored promotional events, from National Sanitation Campaign roadshows to more localized community triggering events.

All MaS! partnerships exhibit some form of public-private promotional efforts, but the relative investment of each likely varies from place to place and involves different public and private actors depending on the context. In addition, as Figure 9 shows, the relative effort of public versus private promotional efforts changes over time depending on consumer awareness of the sanitation issue.

29 USAID, Scaling Market Based Sanitation: Desk review on market based rural sanitation development programmes, USAID Water, Sanitation, and Hygiene Partnerships and Learning for Sustainability (WASHPaLS) Project, Washington, D.C., 2018.

30 USAID, Water, sanitation and hygiene partnerships and learning for sustainability final report, USAID WASHPaLS Project, Washington, D.C., 2023.

In situations in which consumer awareness of the most pertinent sanitation issue is low, whether that is to invest in a safe septic tank in Indonesia, or retrofit a single pit toilet to a twin pit in India, the need for public investment in creating awareness will be high. Conversely, where awareness and even demand for better sanitation is high, private promotional efforts build on what public agencies have done to create basic awareness.



Lesson 3

Reducing market fragmentation in both urban and rural contexts is key to strengthening markets.

The supply chains for the construction and management of sanitation services are fragmented in most of the MaS! contexts, particularly in the four African countries. This fragmentation is amplified in rural areas, where transportation networks and relationships between remote value-chain actors are weak. Thin product margins add an additional challenge to sustaining the availability of products. In addition to mapping and creating links between more 'traditional' distribution networks, such as hardware stores or masons, MaS! countries have been testing multiple approaches to connect rural consumers to sanitation supply chains.

- Sanitation businesses and builders:** This model supports local businesses to supply sanitation goods and services to rural consumers. In Ethiopia, given the market opportunity to upgrade existing toilet slabs, many of these businesses manufacture slabs with SATO Pans already integrated into them and serve as the 'last-mile' retailer as well, rather than selling to another value-chain actor. In Nigeria, there are emerging signs of a more networked business model between larger and smaller TBOs, with larger businesses playing a wholesale function to smaller TBOs located in more remote areas.³¹ Lastly, both Kenya and Tanzania reported instances of masons, or builders, acting as distributors, but it was difficult to quantify to what extent they were acting as the last-mile agent.³²

- **Community health promoters:** This model, found in Kenya, leverages community health promoters to serve as last-mile distribution agents, including testing a one-stop shop that stocks all the inputs needed to construct a toilet in more remote locations. CHPs are found throughout the country, have mandates to improve community health, and trusted sources of information by households. Supporting them to become last-mile retailers has included training on how to promote sanitation, basic business and financial management skills, an initial supply of products, and institutionalization of a publicly funded stipend payment in one county.
- **Local government officials:** The recent model adopted in Tanzania leverages local government structures and facilitates relationships between them and retailers located in larger towns. Government agents or CLTS volunteers then serve as last-mile aggregators of demand, following CLTS triggering or other promotional events, and supply.

In contrast to the last-mile distribution challenges found in the non-saturated markets in rural African contexts, products are generally available in India and Indonesia. The challenge in these contexts is not connecting consumers to existing supply chains. Rather, the focus is on improving relationships and reducing fragmentation among existing value-chain actors. For example, in Indonesia, the digital platform aims to overcome fragmentation by consolidating all the actors along the entire sanitation value chain, such as local public health promoters, financial institutions, suppliers of approved septic tanks, pit emptying businesses, and local regulatory agencies. In India, the approach to overcome fragmented value-chain actors is better described as convergence with existing public financing or faecal sludge management schemes, for example persuading publicly funded self-help groups to add sanitation to their lending portfolios, or creating links between faecal sludge service providers with outlying rural consumers.

Figure 10 summarizes the types of approaches taken by the MaS! programmes to overcome different market fragmentation challenges. In situations with non-saturated

Nature of market fragmentation				
Non-saturated predominantly rural contexts			Greater market saturation, both rural and urban contexts	
Strategies to overcome fragmentation				
Connect rural consumers to supply chains			Converge existing initiatives to address sanitation challenge	Consolidate all value-chain actors into a single platform
Sanitation businesses	CHPs	Local authorities		
MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5

Figure 10: Typology of models to overcome market fragmentation

31 Ongoing market research is investigating how these relationships could be strengthened to further support the emergence of a more integrated business model in the future.

32 Monitoring data from phase I suggested about one quarter of products were sold and distributed through masons in Kenya, but more recent data was not available to see if the trend continued.

markets in which connecting rural consumers to existing supply chains is the main issue, three models of last-mile distribution have emerged. They include the sanitation businesses playing this role in Ethiopia, Nigeria and Tanzania, the CHPs in Kenya, and local authorities in Tanzania. In more saturated market contexts, however, the fragmentation challenge is more about improving connections between value-chain actors. Here, two models have emerged. India has taken an approach of convergence between existing government programmes to finance and manage rural sanitation wastes. Indonesia has opted for a more consolidated approach to market fragmentation by working to build a digital platform in which all value-chain actors participate.

Lesson 4

Smart public finance can expand and sustain access to safe sanitation and strengthen markets.

A 2020 report³³ estimated an annual investment of US\$105 billion will be required to meet SDG 6.2 by 2030. The typical response to the large investment costs is to recognize that neither public nor development partner sources of funding will be sufficient to meet the SDGs, and that the private sector will be needed. Indeed, the opportunity to leverage private sector investment is often one of the reasons why implementers opt for supporting market system approaches to development challenges. Yet, in practice, commercial finance at scale has not materialized to date. Recent analysis showed that between 2017 and 2019, only 1.5 per cent of all commercial finance – the equivalent of 2 per cent of the sector funding gap – mobilized globally was directed towards water and sanitation.³⁴ Advocating smarter uses of existing public finance will thus be important to ensure everyone, everywhere, has a toilet to use.

Using public sources of funding differently or advocating to spend on things that support sanitation markets has been a key success of the MaS! partnerships. As Figure 11 shows, these range from direct investment in toilets for existing public subsidy recipients in Ethiopia (model 1), to public lines of credit for financial institutions to on-lend to consumers in India and Nigeria (model 2), and to supporting the ongoing promotion of sanitation in India and Kenya (model 3).

Users	MaS! Example
Agricultural cooperative members	Agricultural cooperative in Tanzania creates sanitation lending product.
Consumers	Microfinance institution offers loans for septic tank manufacturers or businesses in Indonesia.
Enterprises	Financial institutions in Kenya offer lending products to sanitation enterprises.

Table 8: Summary of MaS! experiences with financial inclusion for sanitation

33 Guy Hutton and Mili Varughese, Global and Regional Costs of Achieving Universal Access to Sanitation to Meet SDG Target 6.2, UNICEF, New York, 2020.

34 Blended finance in the water sector, 2022, World Water Council. Accessed 29 January 2024: www.worldwatercouncil.org/sites/default/files/World_Water_Forum_09/WWC-Successful-Blended-Finance-Projects_WEB_EN.pdf

MaS! countries have also worked with financial institutions to create lending products for different users, as shown in Table 8.

It is well-documented that the total investment must increase in the sanitation sector to meet SDG 6.2. The MaS! experience confirms households remain the most significant source of investment into their sanitation solutions. Financial institutions can be persuaded and supported to create specific lending products, but to make a dent in the sanitation challenge, public funding must increase. The MaS! experiences have shown some practical ways in which public funding can be used in different ways to support the private sector to deliver toilets that people want to use.

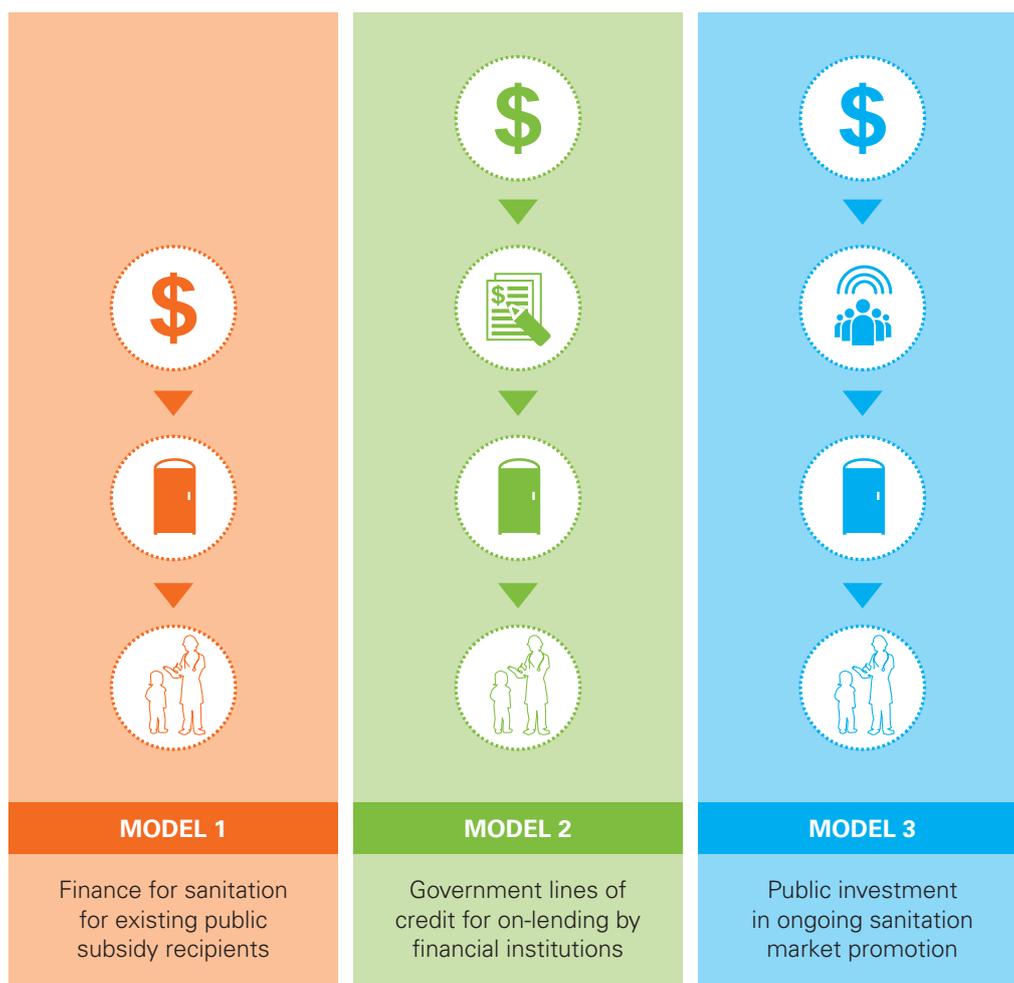
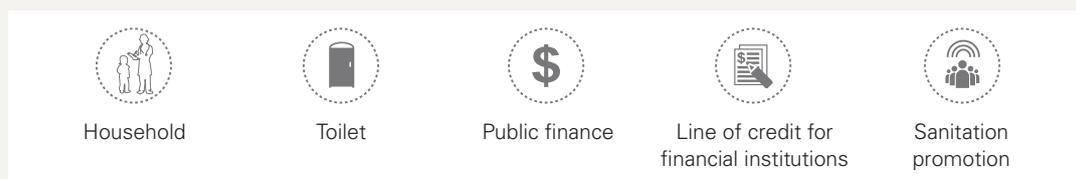


Figure 11: Types of public investment that support sanitation markets



Lesson 5

A more nuanced understanding of policy enablers or blockers is key to creating a stable and well-functioning market.

In some places markets are not reaching their full potential due to affordability, lack of information or other barriers. During the first phase of the partnership, there was less of an emphasis on changing policies, laws, guidelines, etc. As the sanitation sector and country priorities evolved to increasingly focus on safely managed sanitation from a narrower focus on ending open defecation, the MaS! partnership countries have deepened their engagement in policy processes and outputs.

These efforts can be understood as three models, or approaches:

- 1) Support an enabler:** This model of reform refers to supporting a new policy, strategy, law or guideline that would enable a more inclusive and efficient sanitation market.
- 2) Remove a policy blocker:** This model refers to advocating to change a rule that is deemed to be inhibiting sanitation market efficiencies and inclusivity.
- 3) Sustain a gain:** This model refers to supporting a new policy, strategy, law, etc. that sustains a key sanitation market function proven to work.

As Figure 12 shows, most of the MaS! efforts have been directed at supporting enablers, or new policies, guidelines and strategies that have an expected or demonstrated contribution to more efficient sanitation markets. In addition, Ethiopia continues to address several macroeconomic policy blockers that inhibit the entrance of new products and domestic businesses. Lastly, the experience in Kenya offers a third model of policy change with its successful efforts to institutionalize a public stipend payment to CHPs engaged in sanitation promotion.



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Beatrice and her fellow students play a UNICEF-supplied card game that teaches about safe sanitation in Kakoongo Primary School, Kitui County, Kenya.

MODEL 1: Support an enabler

The financing and retrofitting strategy in Odisha and the faecal sludge management policy brief in Bihar are good examples of enablers, or changes that contributed to other positive developments in the sanitation market in India. Having such documents in place was important to crowd in new financing sources to implement the strategies, such as the self-help groups and MFIs.

Another enabler underway is the advocacy work in Ethiopia to persuade the Ministry of Finance to designate sanitation a priority lending sector. This change would lead to the issuing of a regulation so that financial institutions would be obliged to include sanitation loans in their portfolios.

No state level faecal sludge management guidelines existed in Nigeria until MaS! recently supported the government in Bauchi state to develop them. Their implementation is ongoing, but the development has been a foundational step towards better managed wastes.

The lack of a clear domestic wastewater tariff policy in Indonesia needed to be addressed to progress with consolidation of the value chain actors into the digital platform. Implementation is also underway, but an important first step in rolling out the digital platform and working towards improved compliance.

MODEL 2: Remove a blocker

Ethiopia's macroeconomic policies have been identified as a key barrier to a more robust sanitation market. The barriers to import and restrictive foreign direct investment policies discourage the entry of new products and domestic manufacturers. Further growth is also constrained by the high cost of importing raw materials, restrictions on access to foreign currency and repatriation of profits. Considerable advocacy efforts have been undertaken by MaS! to persuade the government to make targeted macroeconomic changes to facilitate sector growth but this remains a work in progress.

MODEL 3: Sustain a gain

The Kitui health bill that provides public monthly stipends for CHVs promoting sanitation is a good example of this type of change. It built on a positive practical experience of leveraging the CHV structure and trusted relationships in communities to promote and supply sanitation to rural consumers.

Figure 12: Typology of approaches to address rules that enable, block or sustain changes

Conclusion

SDG 6.2 will only be achieved if people with toilets today continue to use them, if people who do not have one can build a toilet they want to use, and if wastes are managed appropriately. Ensuring that systems are in place to build, repair, and safely empty toilets, not just once, but on an ongoing basis is fundamental to achieving SDG 6.2.

Five years ago, LIXIL and UNICEF determined that one way to ensure affordable, accessible and desirable products and services were available was to work together. By joining forces, UNICEF and LIXIL have strengthened sanitation markets in Ethiopia, India, Indonesia, Kenya, Nigeria and Tanzania. This analysis considered a sanitation market to be strengthened when there was 1) evidence of change in one or more key functions; and 2) a plausible contribution from that change in market function to improve access to safe toilets as visualized in Figure 13.

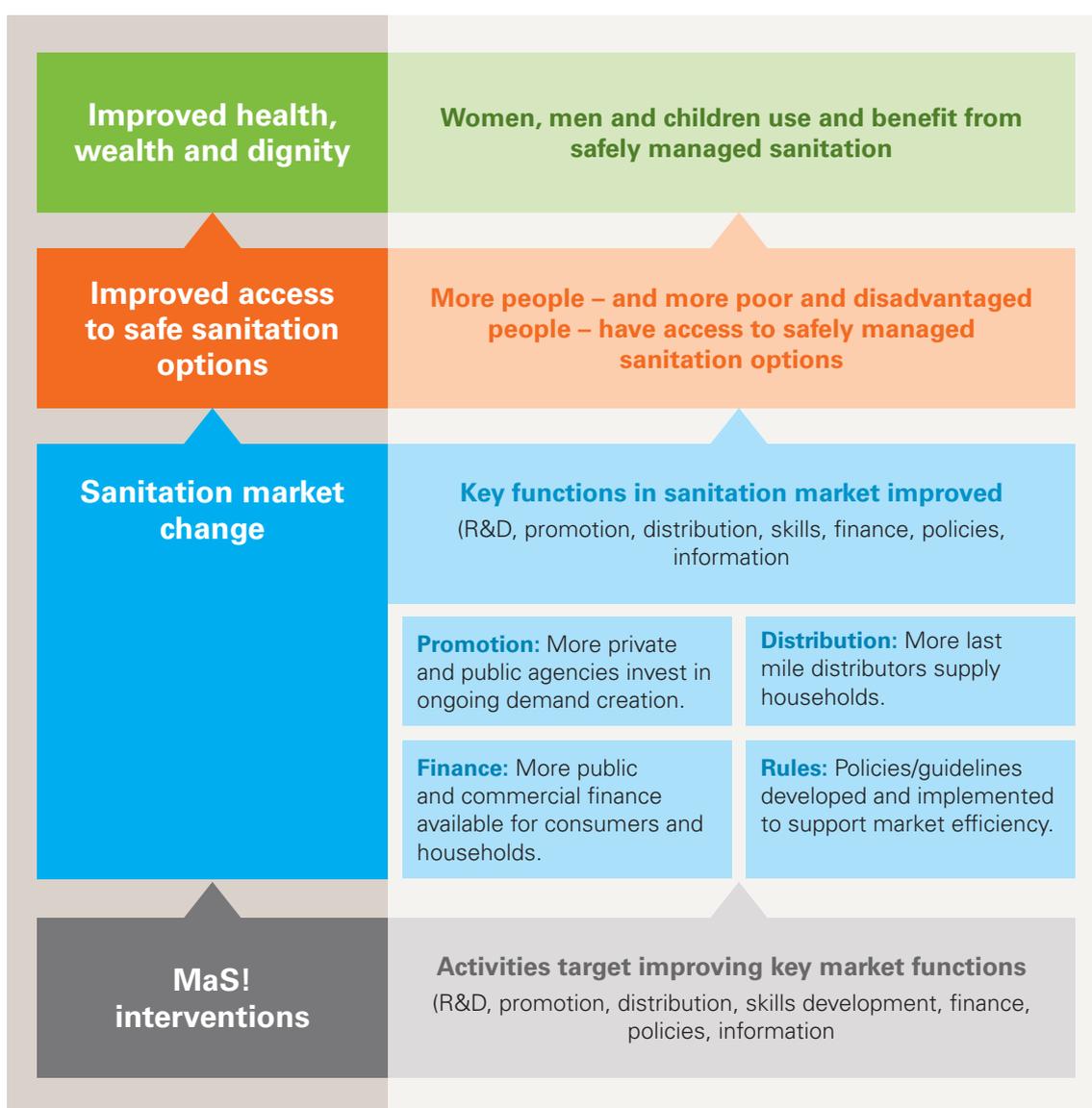


Figure 13: Summary of strengthened sanitation markets across the MaS! partnership

Over time, understanding if these changes are sustained and people continue to access toilet building and emptying services will only provide richer information on the depth of changes achieved in the sanitation market.

Through these strengthened markets, the partnership has reached many millions of people in countries with different socio-economic contexts, sanitation challenges and approaches, as summarized in Figure 14.

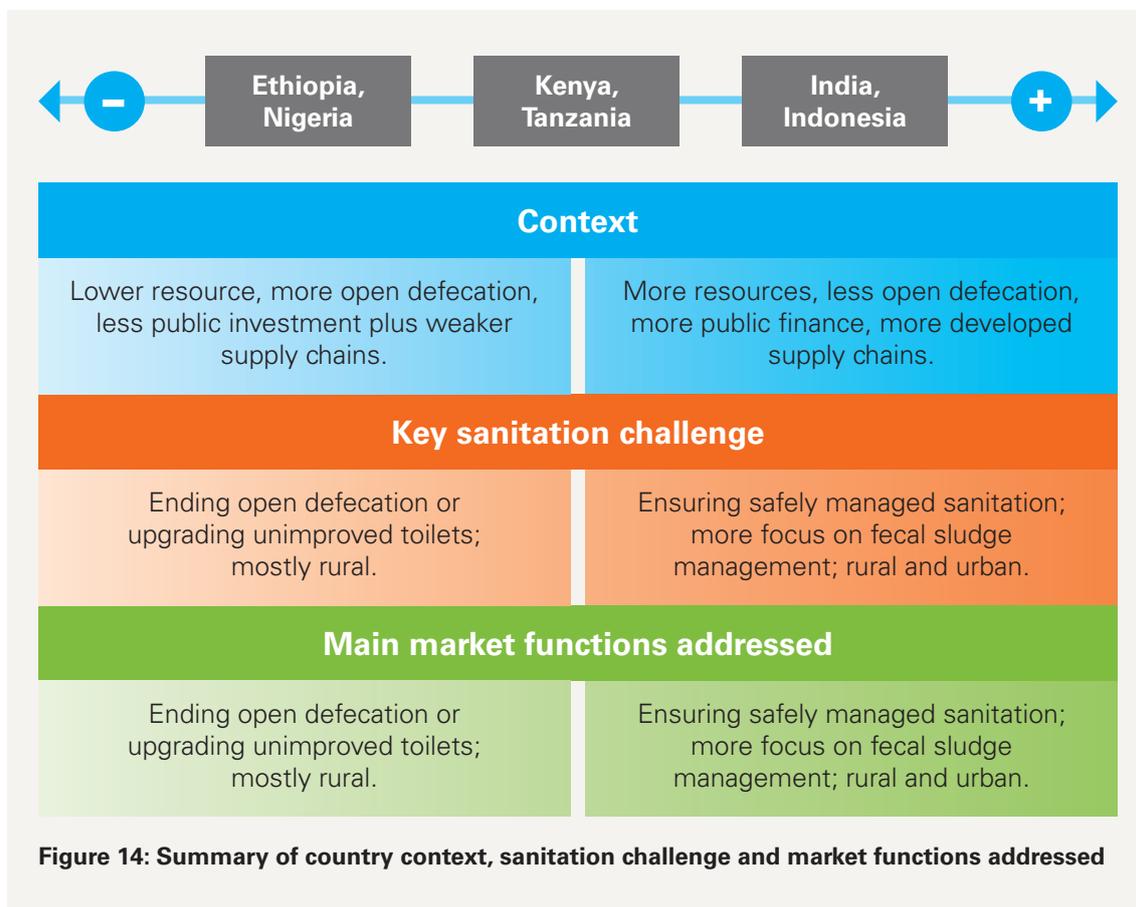


Figure 15 summarizes the five key lessons over the partnership so far. One of the most important lessons has been the need to work beyond the supply and demand of sanitation services. The MaS! experiences build on the growing body of evidence that, to support the ongoing provision of sanitation products and services, programmes will likely need to address factors such as consumer and enterprise finance or policies and regulations that enable the provision of toilets. Much has been learned about how to promote sanitation skilfully using public and private resources. Various strategies to overcome market fragmentation, from connecting consumers to supply chains to consolidating value-chain actors, show that new solutions to old problems are possible. Many sanitation market approaches focus on increasing the supply of commercial finance to the sector, which is a valid thing to do. MaS!, however, has shown how public sources of finance can be directed to improve how sanitation markets work. By identifying and addressing specific rules that block, enable or sustain changes in the market, further progress can be made.

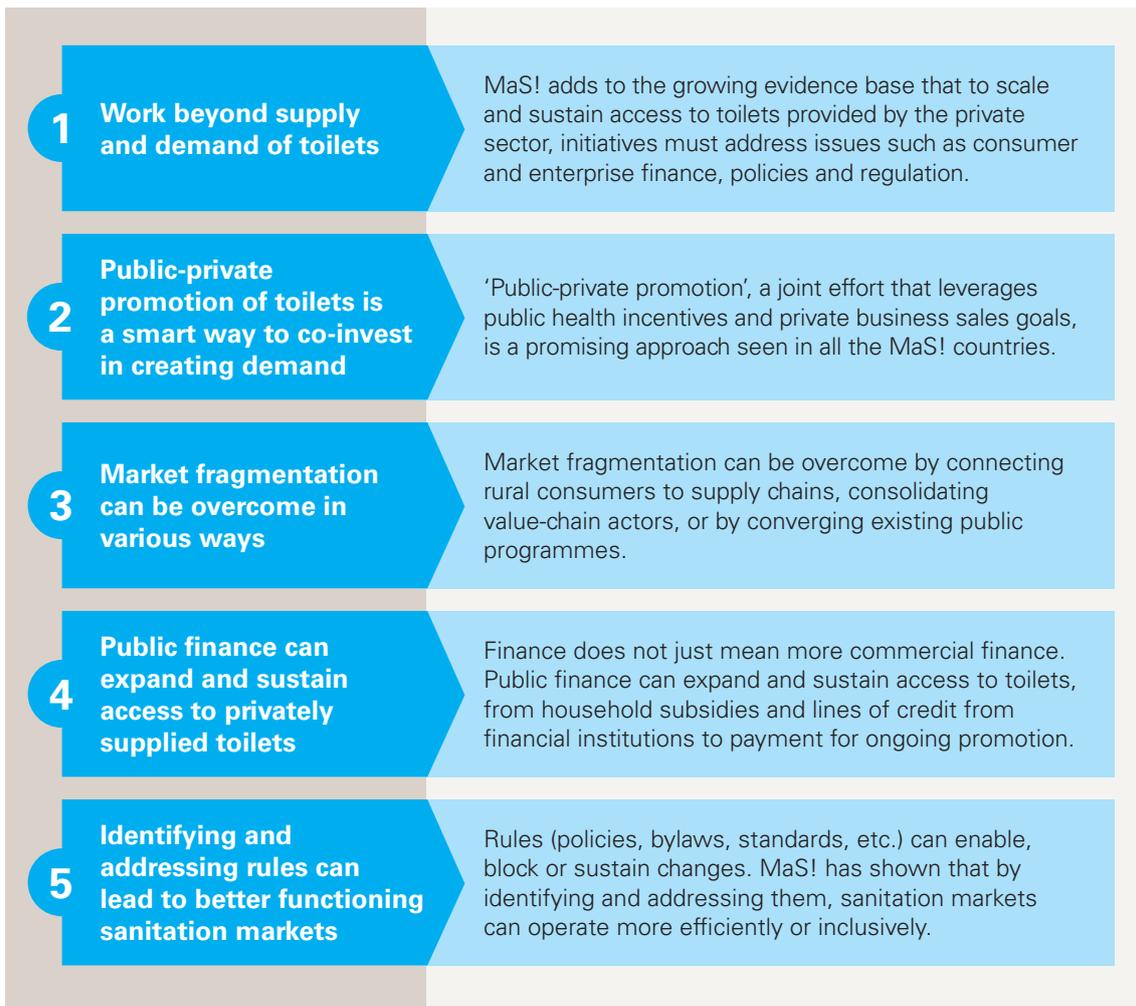


Figure 15: Summary of lessons learned in the MaS! partnership



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Gezahegn Melese, the team leader for communicable disease prevention and control, providing technical support, so the toilet made with cement slabs are built properly. “The toilets were unimproved and made of mud, but now we build it with cement so its easy to clean and sustain,” says Gezahegn Melese.

The MaS! partnership has shown how two institutions with different mandates can practically work together to enable people to build, repair or safely empty a toilet in contexts as diverse as rural Kenya and urban Indonesia. Much work remains to be done, however, to ensure everyone everywhere, uses a safe toilet by 2030. The box below provides some suggestions to other country programmes or initiatives that aspire to strengthen sanitation markets to support governments to reach SDG 6.2 by 2030.

Box 2

Strengthening sanitation markets: Incorporating lessons from MaS! into new or existing sanitation market strengthening initiatives.

UNICEF provides comprehensive guidance³⁵ on how to implement market-based sanitation programmes. UNICEF's recently released Game Plan to Reach Safely Managed Sanitation provides information on how to support governments to reach SDG 6.2 by 2030. The MaS! experience and lessons learned offer practical steps to support better functioning sanitation markets.

Beyond supply and demand: Identify and address 'what else' beyond promoting and distributing toilets would catalyse a more efficient and inclusive sanitation market, such as interventions to strengthen finance, policies and skills.

Promotion: Identify public agencies and businesses that share common goals. Public agencies engage in promoting sanitation, such as community health promoters, public utilities and district health offices. Businesses, such as manufacturers, retailers, builders or financial institutions, have an incentive to promote sanitation to sell their wares. Brokering relationships between public agencies and private companies has been one tactic MaS! has successfully employed to facilitate this 'public-private promotion'.

Market fragmentation: Sanitation supply chains are fragmented in nearly all contexts. Where last-mile distribution is the challenge, look for non-traditional actors who may have an incentive and ability to promote and supply toilets alongside their other work. In contexts where fragmentation among value-chain actors is the greatest problem, experiment with strategies that incentivize collaboration, such as between manufacturers and installers, financiers and retailers, or regulatory agencies and emptiers.

Public finance: Commercial finance has been slow to crowd into the sanitation market, especially for poor rural consumers. A key lesson from MaS! has been the positive experience of well targeted public finance to enhance private sector activity.

Rules that enable, block or sustain: Focus efforts on addressing rules that inhibit efficient sanitation market performance, such as creating or updating policies, guidelines or bylaws.

35 United Nations Children's Fund, Guidance on Market-Based Sanitation, UNICEF, New York, 2020.



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May 2024