AREA-WIDE RURAL SUSTAINABLE SANITATION: LEARNING EVENT – SUMMARY OF DISCUSSIONS

15-16 NOVEMBER 2021 (VIRTUAL)

Background

Since the international year of sanitation (IYS) in 2008, a range of rural sanitation and hygiene programs has been implemented. Out of the strong belief that commitments to rural sanitation must be maintained and even expanded by governments and development partners, and building upon the lessons learned from the programming of the past decade and a half, an informal working group consisting of representatives of Plan, SNV, UNICEF, USAID, WaterAid, the World Bank, and the WSSCC developed a Call to Action: **"Delivering Rural Sanitation Programs at Scale, with Equity and Sustainability, Rising up to the Sanitation Ambition"** in October 2019 (see adjacent box)

The Call responds to the view that dedicated rural sanitation programming appears to be on the decline (see WaterAid's donor landscaping analysis).

To share latest thinking, evidence and research, SNV, UNICEF, USAID, WaterAid, the World Bank, and the Sanitation Learning Hub, convened a virtual learning event intended to highlight, reflect on, and disseminate the growing body of knowledge on best practices for expanding rural sanitation, with the goal of further encouraging donor and government commitments. The purpose of the event was expressly not to promote a particular set of research findings or implementation tools, but rather to afford an opportunity for all participating institutions to introduce key learnings and to reflect on those of others.

Participants met virtually over two half-day sessions to discuss the six inter-related themes listed below. (Thematic discussions ranged from 45 to 90 minutes.) A list of suggested readings, a briefing note, and a set of guiding questions were provided in advance to inform the discussions and ensure the same starting point for participants. The list of participants and references are provided at the end of this summary.

Key Learning Event Themes

1. Evidence of the opportunities and challenges for achieving scaled and lasting rural sanitation gains
2. Ensuring local government-led rural sanitation
3. Understanding, nurturing and strengthening markets for rural sanitation
4. Reaching the most vulnerable through subsidies

Five Principles of the Call to Action:

1. **Government Leadership:** Programs are led by national and local government, who display strong political leadership, backed with human and financial resources.
2. **Stakeholder Alignment:** All stakeholders align with strategies and plans agreed at national and local level and work in a coordinated way, strengthening government systems
3. **Area-wide Programming:** Programs are designed to reach all within a given jurisdiction, at home and in public institutions, building on available institutional capacity and resources.
4. **Inclusive Solutions:** Programs strive to understand which communities and individuals are at risk of being left behind and take measures needed to address such inequalities.
5. **Evidence-based and Adaptive Implementation:** Programs are informed by the context, adapt and combine approaches based on what works where, and use learning loops.

Call to Action for Different Groups

- **Governments** to set ambitious targets, display political leadership, invest the necessary resources, and build in review processes to overcome obstacles and ensure inclusion.
- **Donors** to increase their investments and support, allow for longer timeframes, stimulate innovation, and focus on equitable results and systems strengthening.
- **Development Partners** to foster government leadership, strengthen local capacities, increase coordination, tailor approaches to context, and learn and adapt constantly.

5. Delivering sanitation products and services in challenging contexts and in the context of climate change
6. Delivering area-wide sanitation and supporting data solutions

Learning Event Objectives

1. To share, reflect and discuss the latest evidence and tools for area-wide rural sanitation and related hygiene programming among a group of key implementing organizations and funders; and
2. To identify which elements of knowledge could be instrumental in accelerating and consolidating innovation in rural sanitation programming. (These key elements were then shared with a wider audience of funders, decision makers, and other stakeholders during a session at AfricaSan with a proposed follow-on day with Asian stakeholders in early 2022.)

The narrative below provides the initial framing of the topics as based on the background notes and the introductory presentations on the day followed by a brief summary of key elements of and takeaways from the discussions.

Topic 1: Sustainable Change at Scale

Achieving and maintaining sanitation gains is an obvious priority for development policy and programming. Sustained access and use of sanitation facilities does not imply having one and the same toilet forever; it is about having access and use of a toilet at any point in time. This point is important when assessing sustainability; even durable facilities will eventually require maintenance and potentially replacement.

Without regular maintenance and investment, a decline in access and use of sanitation should be expected as infrastructure decays and communities undergo demographic changes. The former depends on the expected lifespan of the infrastructure and the resources and attention dedicated to maintenance. More robust infrastructure will have a longer lifespan and require less maintenance, but even the most durable facilities can be abandoned or otherwise fall into disuse. This means that the "robustness" of infrastructure is important, but this element alone will not guarantee sustainability. A successful, sanitation service delivery system ensures that maintenance and investment happens in a timely and effective manner for all.

This is an essential point: **many rural sanitation programs are configured to increase access, and there often is limited attention to the functions needed to ensure sustainability over time.** Institutions with a legal or regulatory responsibility for sanitation may have limited ability or resources to continue program execution beyond initial achievement of expanded sanitation coverage. In this sense, the rural sanitation sub-sector is going through the same learning process as rural water supply, where sustainability and functionality questions began emerging 20 years ago or more as handpumps and other rural systems began to fail from inadequate operation and maintenance.

"External" rural sanitation interventions—those deployed by or with heavy financial or operational support from actors other than in-country authorities with responsibilities for sanitation service provision—frequently seek to increase access but do not explicitly intervene in ongoing operation and maintenance. At times, the desire to see results on the ground can be so strong that the existing local service delivery system[1] is effectively bypassed and activities are conducted directly with communities. Without effective involvement of subnational authorities, the systems needed for sustained and scaled results may be largely ignored (or heavily de-prioritized). Such systems include ongoing investment to: 1) ensure sufficient capacity at national but more often subnational levels for planning and budgeting; 2) explore appropriate financing, governance, and coordination mechanisms; and 3) develop robust monitoring systems to scale up and sustain interventions.

What do we know about change at scale?

The good news is that there is evidence that an integrated, area-wide sanitation and hygiene intervention can make a significant difference in terms of expanding *access*. SNV's Sustainable Sanitation and Hygiene for All (SSH4A) approach – integrated demand creation, sanitation supply chain development, behavior change promotion, and support on governance to strengthen sustainability – was implemented in 12 district-level program areas in 11

[1] The "service delivery system" is defined as encompassing everything around the household, including government activities, the market system, any social support mechanisms, etc.

countries, including Bhutan, Ethiopia, Ghana, Indonesia, Kenya, Mozambique, Nepal, South Sudan[2], Tanzania, Uganda, and Zambia. An impact study by Apanga et al. (2020) showed an overall increase of basic sanitation access of 53 percentage points over 4 years.[3] This is significantly higher than the progress of 14 percentage points found in the published systematic review of sanitation results conducted by Garn et al. (2016). Apanga et al. (2020) suggest that the improvement may be related to: 1) longer timelines for implementation, and 2) having an integrated approach. The integrated SSH4A approach led to increased access across all wealth quintiles, but gaps in access for lower wealth quintiles remained.

WHAT DO WE KNOW ABOUT SUSTAINING CHANGE OVER TIME?

A major challenge is whether there is sufficient capacity in the local service delivery system to sustain (or even expand) access increases over time. Two recent analyses offer insights here:

1. USAID Water, Sanitation, and Hygiene Partnerships and Learning for Sustainability (WASHPaLS) field trial of partial, targeted subsidies in Northern Ghana (add ref), and
2. Evaluation of the SSH4A program (Apanga et al. (2020) and Apanga et al. (2021)).

The WASHPaLS study, based on a full census of households in 109 open defecation free (ODF) communities in Kpandai and Tatale districts of Northern Ghana, collected longitudinal data from approximately 5,400 households at two time points (before and after implementation of a pro-poor subsidy intervention delivered as vouchers for concrete, masonry, or plastic toilet substructures). It used specific definitions of functional and durable toilets (see box). For the purposes of the Learning Event discussion, the WASHPaLS team also calculated changes in coverage per the Joint Monitoring Programme (JMP) definition of basic sanitation access.

INDICATORS USED IN THE WASHPaLS STUDY

Indicator: Households owning or co-owning and using a *functional* toilet. A "functional toilet" is defined as one having a complete or partial superstructure and a usable pit (i.e., not collapsed or full as verified through observation). "Use" of the toilet indicates that it was reported as the household's primary defecation location. "Ownership" indicates that a single household built and controls the facility, while "co-ownership" indicates multiple households contributed to construction and use the facility.

Indicator: Households owning or co-owning and using a *durable* toilet. A "durable toilet" is defined as a functional toilet with full superstructure and a durable substructure (i.e., plastic, rock, brick, or concrete pit lining, and concrete or plastic slab as verified through observation).

The WASHPaLS study found unexpectedly high slippage from ODF achievement, with self-reported open defecation as the primary behavior at home increasing from 25 percent at baseline to 69 percent at endline (20-24 months later) for control communities and 25 percent to 54 percent at endline for subsidy intervention communities.[4] Failing infrastructure was the reported cause: 95 percent of households who reported previously owning a toilet but no longer owning one at endline attributed the change to substructure and/or superstructure collapse.

For the SSH4A analysis, the Apanga et al. (2020) and Apanga et al. (2021) studies are based on repeated cross-sectional household surveys in 66 local government areas (district, sub-county, *woreda*, *kabupaten*) in Ethiopia, Bhutan, Ghana, Indonesia, Kenya, Mozambique, Nepal, Tanzania, Uganda, Zambia. Surveys were conducted in 12 program areas in 10 countries, with 22,666 households. Of the 12 program areas, half had similar coverage levels of basic sanitation 1-to-2-years post-intervention (Bhutan, Ghana, Kenya, Nepal 1, Nepal 2, and Tanzania). However, the other six areas (Ethiopia 1, Ethiopia 2, Indonesia, Mozambique, Uganda, and Zambia) had varying levels of slippage (from 63 percentage points in Ethiopia 1 to only 4 percentage points in Indonesia). Although all program areas still had higher coverage than at baseline, the degree of slippage was observed to correlate with high increases of coverage between baseline and endline. This suggests that areas or districts that make a fast jump in sanitation

[2] The program in South Sudan was stopped in 2015 due to security reasons.
[3] Surveys were conducted in an average of 21,411 households at each round of data collection.
[4] These OD increases correspond to a 71 percent decline in the proportion of the control population with access to "basic" sanitation as defined by the WHO-UNICEF Joint Monitoring Programme's Sanitation Service Ladder and a corresponding 53 percent decline in proportion of the intervention population with access to JMP "basic."

coverage may find it harder to sustain the gains. The team's view is that this is related to the maturity of the service delivery system (governance, market and civil society aspects) as well as the wider governance and market systems in the area. The social behavior change methodology likely also has an influence on slippage. Higher slippage was correlated with a lower coverage at baseline and was found to be highest among the lower wealth quintiles (18 percent slippage among the lowest two quintiles, compared with 11 percent among the highest two quintiles).

Participant Discussion and Key Takeaways

Participants in the Learning Event noted that the causes of slippage are likely to vary among countries and program areas. Discussions highlighted that analysis of underlying causes should distinguish between those related to the user and those that are a function of the service delivery system. Table 1 flags a range of causes for slippage.

Table 1. Underlying causes for slippage

At the user level:	At the level of the service delivery system:
• Contextual socio-cultural factors around use (including considerations of equity and inclusion) • Insufficient availability of water • Inability for households to prioritize latrine maintenance over other investments • Ease of cleaning/cleanliness of toilets • Poor design, poor construction and/or limited durability of latrines (resulting in damage due to use or weather events) • Investment preference for toilets with a short lifespan and relatively high maintenance needs (i.e., "non-robust" toilets)	• Limited capacity to move from a social mobilization approach to a sustained coverage approach with unclear parameters, no policy in place, no examples to guide, etc. • Program emphasis on toilet construction rather than behavior change and systems building • Cherry picking/lack of incentives for private sector once the bulk of households have toilets with remaining market and maintenance requests small and/or intermittent • Low government priority on sanitation combined with resource constraints resulting in poor monitoring, and insufficient post-project support and integration in regular health system and so longer-term outreach fails

Interventions aimed to *increase* latrine coverage differ from those intended to *sustain* latrine coverage. Discourse at the national and international levels should be rebalanced to emphasize sustainable access alongside increased access targets. Participants agreed that specific measures to maintain sustainability should be a consistent feature for all programs and embedded more systematically from the start in community public health programs. Longer timeframes are likely needed for projects and programs to build effective service delivery systems focused on sustainability at an area-wide level. Behavior change messaging should be tailored to different programmatic stages (pre-intervention, during the intervention, and post intervention), as well as nuanced depending on whether initial latrine coverage is under, say, 20 percent, under 60 percent or closer to 80 percent. Attention should also be paid to moving users up the sanitation ladder whenever possible (away from shared latrines to improved to basic) and improving operations and maintenance from basic to sustained to safely managed.

Topic 2: Local Government-Led Rural Sanitation

Along with sanitation's role in achieving public health outcomes, many countries recognize access to sanitation as a human right. This makes government the duty-bearer of progressive realization of this right in their jurisdiction, seeing access realized and sustained and public health outcomes achieved. Although governments may not necessarily be the direct service provider, they should have oversight and an enabling role. In practice, this means that government—as policy maker, allocator of resources, and regulator—should make sure that sanitation gets sufficient priority within planning, target setting and resource allocation at all levels. Government also should develop and enforce minimum service standards and monitor access, including the collection of disaggregated information on access by vulnerable and marginalized groups. It should ensure clarity of roles and responsibilities,

coordination, capacity at different government levels, and prevent corruption. Government should protect and promote the right to information and participation of citizens in decision-making related to sanitation.

Which roles at which levels of government?

In most countries, the responsibility for realizing the right to rural sanitation lies at the local government level. National and state/regional governments play an essential role in fostering local government leadership and capacities through the development of strong policies, frameworks and commitments, benchmarking and learning events, and fostering healthy competition through the ranking of progress. International support for sanitation tends to engage at the national level, with rollout through line ministries (health, rural development, water, etc.).

At the same time, local governments are frequently severely under-resourced with limited budgets, limited staffing, high turnover, and low overall capacity—and sanitation may not be a priority. Local governments are dependent on funding from national authorities, which may be lower (and come later) than initially committed, and their capacity to raise local tax revenue is generally limited. Thus, structural problems not specific to sanitation may hinder local government progress.

Understanding and building on the incentives and accountabilities (including to national governments) that shape local government involvement in sanitation forges progressive continuity across different (elected) administrations through the tools of data, dialogue, benchmarking, and technical capacity, among others.

Participant Discussion and Key Takeaways

Having flagged four possible pathways towards government-led rural sanitation (highlighted below and extracted from the background paper), participants had a wide-ranging discussion on the requirements to make these strategies effective:

Strengthening the use of data – While resources for the development and maintenance of monitoring systems remain low, gathering and presenting data in concise and compelling formats can be a way for external institutions to help influence decision makers and trigger commitments among local governments. This includes demonstrating both the health and economic benefits of improved sanitation and hygiene services. Using feedback loops to update data and then displaying data throughout a campaign or program can also help maintain commitments.

Aligning through multi-stakeholder dialogue – Bringing all stakeholders in a given jurisdiction together to reach agreement around approaches, tools and standards can accelerate progress and strengthen government leadership. Participation of a local chamber of commerce or other local business association can mobilize and promote enabling conditions for private sector engagement. Alignment and consolidation through jointly agreed district sanitation plans linked to the broader formal planning system can create further momentum. For external supporting institutions, the emphasis should be on contributing to the local service delivery system as a whole, rather than the standard need for attribution and stand-alone, target setting as generally framed by current practice and required under current funding models.

Strengthening specific capacities within local government – Even if there is willingness to lead on sanitation, many subnational officials (at the political, technical, and administrative levels) lack specific skills and knowledge to do so. This may range from knowledge about national regulations and standards and sanitation technologies to skills in understanding data and developing appropriate sanitation messaging to organizational capacities to lead and facilitate meetings. Beyond training, coaching and peer-to-peer learning among key officials can foster effective leadership. Ultimately, there is a need to understand how best to pace and design interventions so that they gain momentum and traction with the requisite increases in budget allocations, but also to design external support in a way that generates and ensures local ownership. This could mean working more closely with national departments and institutes responsible for building local government capacity as well as those more fluent in governance and public sector finance flows.

Cascading systems of accountability – Related to the importance of data is the need to build social accountability mechanisms (to complement formal accountability mechanisms). Where rural sanitation has been taken to scale, accountability cascades across and through higher to lower-level peer groups. For example, all ward leaders within a district/county, all district heads in a region, and all regional governors in a state must hold each other accountable.

Thus, the heads of local government become visible, not just the line agencies or local departments responsible for sanitation. Such pledges and tracking efforts should be supported by communication activities to raise awareness, enhance participation, elevate messages upward, and give credit where credit is due. Linked to giving credit is the fact that local government staff are motivated by factors related to reputation and pride.

Topic 3: Understanding, nurturing and strengthening markets for rural sanitation

The scale of investment required to deliver sanitation goods and services to those who lack access is beyond the capacity of public finance alone. Experts increasingly view market-based sanitation (MBS) as a promising approach for scaling the delivery of onsite sanitation to households that are not connected to centralized wastewater collection and conveyance systems. Successful MBS interventions in Southeast Asia and Bangladesh demonstrate the promise of this approach, yet those successes have proven difficult to replicate in other regions, particularly sub-Saharan Africa, where the need is greatest.

In designing and implementing market-based approaches, stakeholders—governments, donors/funders, and program implementers—need to consider a) the barriers to developing and scaling sanitation markets, and b) strategies that have worked to overcome barriers to scale.

Barriers to scale – The USAID WASHPaLS project developed a framework to understand sanitation markets and identify barriers to scale that warrant interventions by governments, donors/funders, and program implementers (see Figure 1). Taking a market systems view, the framework identifies three distinct domains: (1) *context*, in which external support institutions must seek to understand but typically cannot influence; (2) the *business environment* shaped by government policy, supply chains for raw materials and financial services, which external actors can potentially influence, depending on complexity and resources available; and (3) *the core sanitation market*, comprised of customers, enterprises, and entrepreneurs, which external donor-funded programs can address. The severity of barriers across these domains determines market maturity. (See USAID (2022) [WASHPaLS Senegal MBS analysis forthcoming] for a practical application.)

What evidence exists on effective practices and approaches?

Ensuring commercial viability is critical for sustained provision of sanitation-related products and services. Viable enterprises (i.e., those generating profits that meet or exceed entrepreneurs' own criteria for remaining in operation) sustain market participation while those that incur losses or generate inadequate profits exit the market (USAID, 2021). But program implementers often lack the range of knowledge and skills relating to business, strategy, and marketing essential to provide business development support and foster viable enterprises.

Recruiting entrepreneurs with existing businesses to operate sanitation enterprises as a business line improves viability. Profits from sanitation enterprises alone often are low and unstable due to infrequent or seasonal demand. A sanitation enterprise is far more likely to be viable when operated as a business line alongside an entrepreneur's existing, related business(es). This configuration reduces the entrepreneur's dependence on sanitation products and services for income, lowers start-up capital requirements, and offers recurring business benefits from sharing assets, capabilities, and customers among the entrepreneur's several business lines (USAID, 2021). Masons, often trained by MBS programs, rarely are successful as sanitation entrepreneurs because their bespoke, on-site business model lacks the assets and capabilities required.

Designing product systems for the local context by incorporating customers' preferences and local suppliers' capabilities is critical. Several programs studied by WASHPaLS adopted human-centered approaches to design product systems. Successful programs typically re-engineered existing toilets and even manufacturing processes to improve affordability and durability of toilets instead of introducing radically new designs that require customer and supplier education. Evidence on the appropriate range of product systems to address large segments of the market is lacking.

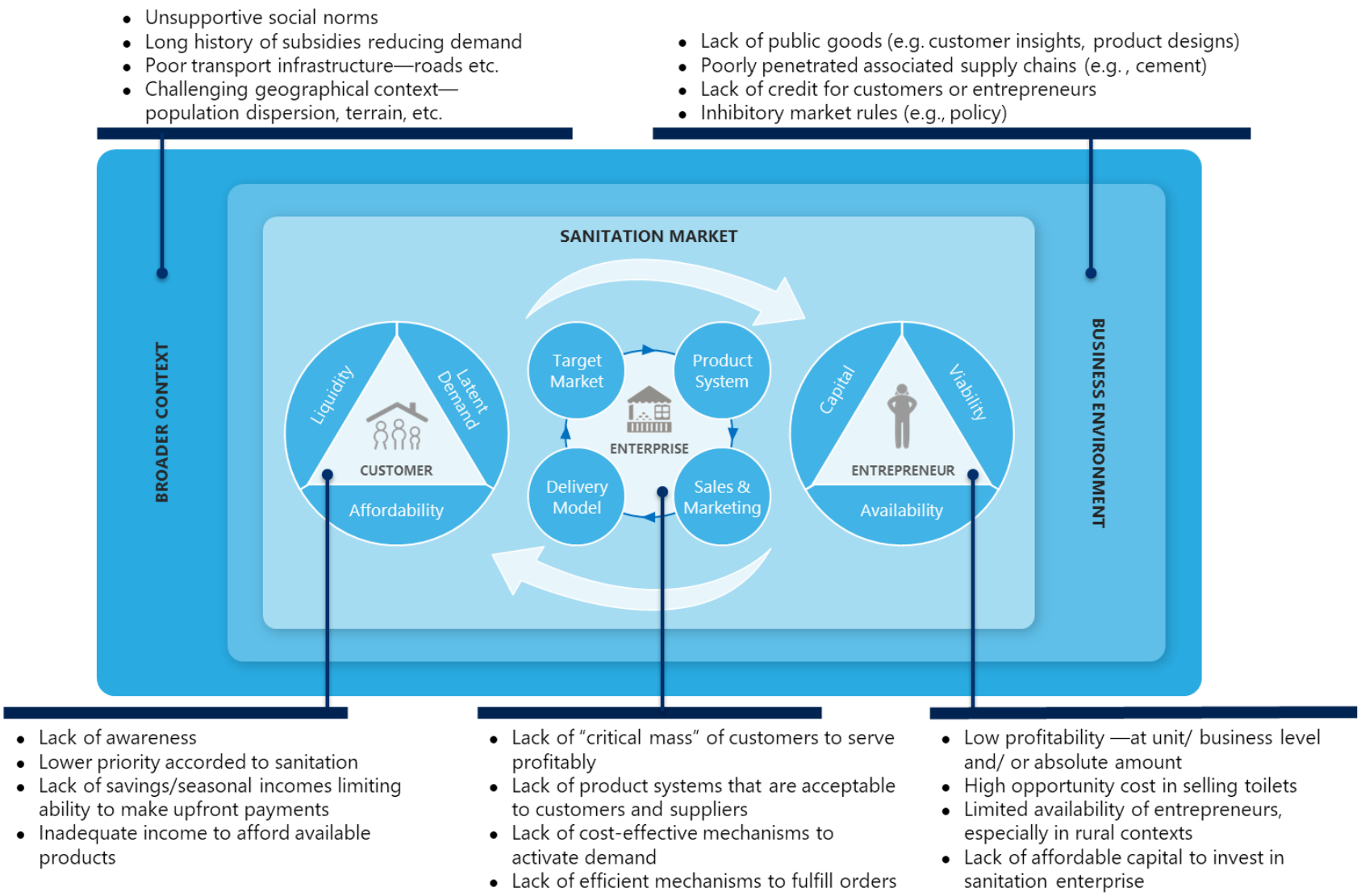

Figure 1. Barriers to scaling MBS across the sanitation market system, from USAID (2018)

Active sales—what WASHPaLS refers to as "demand activation"—also is crucial. While demand *generation* stimulates customer interest in purchasing a toilet, demand *activation* persuades customers to fulfil their desire through a purchase. Enterprises that WASHPaLS studied that achieved high sales often acquired customers by investing in demand activation through commissioned sales agents (and to a far lesser extent, unpaid demand activators (e.g., local leaders), and active self-marketing) (USAID, 2021). Investment in demand activation was commonly a differentiating factor in the scale performance of both individual enterprises and broader MBS programs.

Participant Discussion and Key Takeaways

While focusing on potential distortions that emerge from particular interventions, it is important to address barriers in the business environment. Engaging with different stakeholders can help to identify and explore these barriers in more depth. MBS programs that achieved high scale overcame barriers such as gaps in construction material supply chains while also enabling capital provision for customers and entrepreneurs. Donor capital channeled as revolving funds or credit default guarantees to financial institutions demonstrated a possible market opportunity for consumer and enterprise sanitation loan products (USAID, 2018; USAID, 2021), but much more evidence is required on successful credit strategies.

Donors must commit to longer-term interventions. Sales may only accelerate several years after the initiation of well-designed interventions. The initial period of MBS programs typically involves learning about particular markets and iterating interventions to identify appropriate product models and to determine what needs to be done to enable MBS-based interventions.

Some key questions that emerged from this session included the following:

- What should be the roles and responsibilities of different actors in an MBS approach?
- How much subsidy is needed to turn the poor into profitable customers? In some markets, 10-15 percent has stimulated purchases significantly. Elsewhere it may be much higher.
- How do we combine MBS with subsidies for those who need it?
- What is the minimum scale (of customers and supply capacity) needed for a sanitation market to take off?

Topic 4: Reaching the most vulnerable through subsidies

Various approaches can be used to identify and reach vulnerable and marginalized populations. The discussions during the learning event were primarily around how best to target and apply a subsidy approach. Conventionally, Community-Led Total Sanitation (CLTS) has been implemented as a zero-subsidy approach, focused on behavior change and collective action. Several studies have provided evidence that CLTS can more effectively stimulate demand for toilets where there is no prior history of WASH subsidies. However, growing evidence suggests that more vulnerable households may not benefit equally from such interventions (Crocker et al. 2016; Harvey 2011; Rama 2016; Venkataramanan 2016). For example, they may construct lower quality toilets that do not last or purchase facilities they are not truly able to afford by selling assets or taking on unmanageable debt. As a result, they may be more likely to revert to open defecation.

Accordingly, interest is increasing in targeted subsidies for poor and vulnerable households. Programs that involve targeted subsidies must consider at least two key questions:

1) What methods and selection criteria will be used to identify vulnerable households that are eligible for a subsidy?

2) Once households are selected, what form will the assistance take?

Targeting methods. While many governments subsidize water supply and sanitation services, targeting of these subsidies is often faulty, and relatively wealthy households may capture benefits meant for the most vulnerable. Several established methods of varying complexity can be used to identify poor households, such as:

- *Categorical targeting* is based on a small number of characteristics that can easily be identified;
- *Geographic targeting* identifies entire areas that may be poorer than average;
- *Community-based targeting* relies on input from community members to identify the most vulnerable, and can involve specific inclusion criteria, ranking of households into wealth categories, or other methods;

- *Proxy means tested targeting* is based on a set of household characteristics that act as proxy indicators of wealth, which are then used to calculate a poverty score; and
- *Mixed approaches* combine at least two different methods.

Subsidy type. In past decades, sanitation subsidies often involved the direct provision of latrines, slabs, or construction materials. In contrast to this supply-driven approach, at least five types of demand-driven targeted subsidies have been employed in rural sanitation efforts:

- *Discount vouchers*: households receive a voucher to purchase one or more specific products available in local markets at a discounted price;
- *Discount vouchers with results-based payments to suppliers*: households purchase products at a discount, and suppliers are reimbursed only after toilet construction has been verified;
- *Cash rebates*: households receive a payment after constructing a toilet facility;
- *Upfront cash transfers*: households receive cash that they can use toward the purchase of a toilet; and
- *Subsidized microloans*: households can take out sanitation loans with preferential terms through a local microfinance institution

WHAT EVIDENCE EXISTS ON THE EFFECTS OF SANITATION SUBSIDY PROGRAMS?

On the subject of subsidies, the WASHPaLS' 2017 CLTS Desk Review concluded the following:

> *"There is a broad consensus among implementers that a previous history of subsidized latrine construction often render communities less receptive to CLTS triggering (Venkataramanan, 2016; Harvey, 2011; Sah & Negussie, 2009). This is consistent with the position articulated by Kar & Chambers (2008) in the Handbook, and a central motivation for the development of CLTS to begin with. Some careful attention to the definition of subsidy is important. Crudely designed subsidies (including government construction of toilets or other forms of full assumption of costs by governments) differ dramatically from more carefully targeted forms of support. The magnitude of a subsidy relative to overall latrine costs, whether the subsidy is offered in cash or in-kind (in the form of a constructed subsurface assembly or else a fully completed installation with superstructure), whether the subsidy is offered as an upfront discount or a post-installation rebate, to whom the subsidies are targeted, and how differing forms of subsidy are timed relative to a CLTS triggering process, are all essential considerations. We also note that reports on the effects of prior subsidy, while widespread, are generally anecdotal in nature, which is unsurprising as the impact of prior subsidy impacts on demand for toilets (or defecation behaviors) would be exceedingly difficult to test experimentally."*

The advantages of providing financial assistance to rural households for purchasing and installing durable onsite sanitation is increasingly supported by the published evidence, as described below. The main lesson can be summarized as follows: subsidies should no longer be considered taboo in rural sanitation programs. Partial subsidies drive increases in latrine ownership, and equally importantly, increase the likelihood of installing durable facilities that are likely to remain functional over time. Delivering subsidies as part of – or in concert with – CLTS certainly has a cost implication, but given its advantages in expanding coverage, particularly to the most vulnerable, those costs may well be justified relative to the accompanying benefits.

In terms of experience on the ground, to date, most programs combining CLTS with targeted subsidies have been implemented in Asia. A randomized controlled trial (RCT) in Bangladesh (Guiteras et al. 2015) investigated the impact of offering discount vouchers covering 75 percent of the cost of a latrine during CLTS interventions to the bottom 75 percent of households in a community's wealth distribution. Compared with CLTS-only villages, this targeted subsidy program increased toilet coverage overall by 9 percentage points and reduced open defecation by 7 percent. Voucher-eligible households in treatment communities were up to 21 percent more likely to own hygienic latrines than the same group of households in communities that only received CLTS.

In Lao PDR (Cameron et al. 2021), the poorest 30 percent of households were given rebates after construction covering approximately 13 percent of the total toilet cost including the superstructure. This rebate increased community toilet ownership by 7 percentage points, and increased toilet ownership among poor households by 22 percent relative to poor households in communities without the program. These increases in community sanitation coverage were also associated with health benefits, with a 10 percent increase in sanitation coverage reducing the probability of childhood stunting by 3 percentage points. ODF cash awards to villages also performed very well at increasing coverage relative to CLTS alone.

The USAID Nurture Project then supported 471 communities with promotional activities to increase latrine coverage. Throughout the first three years of the project, 79 of 471 communities achieved ODF (16 percent) after only receiving CLTS support. On average, it took communities 32 months to achieve ODF status after being triggered through the CLTS process. In the final year of project implementation, USAID Nurture introduced a targeted 30 percent household sanitation subsidy program in 212 communities to support vulnerable households to purchase and install a toilet facility in their home. After only four months of implementation, providing 879 households with subsidized sanitation facilities, 60 out of 212 supported communities achieved ODF status (28 percent). On average, it took 2-3 months for these communities to achieve ODF status. Similar results were also documented in the USAID NOURISH project in Cambodia, where 138 of 387 communities achieved ODF status. Among the 138 communities, 126 (91 percent) had participated in the NOURISH household sanitation voucher program.

Outside of Asia, USAID/WASHPaLS recently completed the first RCT of a sanitation subsidy program in sub-Saharan Africa, focusing on a UNICEF program in two districts of Northern Ghana. This program sought to encourage upgrading of latrines in communities that had already been declared ODF. It selected eligible households through community-based targeting, with approximately 14 percent of households being identified as poor and vulnerable. Eligible households received a voucher that could be redeemed with local artisans to cover the full cost of a concrete, masonry, or plastic toilet substructure. Households were responsible for digging the pit and putting up the superstructure, and artisans were paid using a results-based system. Generally, sanitation conditions deteriorated substantially among post-ODF communities, with open defecation increasing from 25 percent at baseline to 69 percent at endline among all households in control communities (where subsidies were not implemented). OD for *all* households in treatment communities went from 25 percent to 54 percent. However, open defecation decreased by 7 percentage points (from 25 percent to 18 percent) among voucher-eligible households in communities where the subsidy program was implemented.

Importantly, *non-eligible* households also exhibited benefits if they lived in the same compound as eligible households that received the subsidy intervention, as compared to those in control communities. While open defecation increased dramatically among non-eligible households sharing compounds with eligible households in the control communities, its increase was very modest among such households in intervention communities.

Participant Discussion and Key Takeaways

Ultimately, beyond the challenge of targeting and design (to get beyond certain threshold points like 60 percent coverage and then 90-95 percent coverage), participants raised a number of issues around subsidies:

- costing, financing and value for money and related choices based on using funds for subsidies versus ensuring sufficient local government capacity, for example, as well as the cost of the subsidy component relative to the cost of the whole intervention;
- rather than creating a sanitation-specific subsidy program, how best to link into other subsidy or household and community support mechanisms;
- how to ensure that subsidy programs do not distort market-based approaches as well as ensuring that there is consistent logic whereby subsidy approaches (even across thematic areas) do not compete with each other, and are seen as fair;
- how to understand debt challenges of poor households and more informed choices based on more complete information on the cost of different options (including lifecycle costing) and combining this with an understanding that households should ideally see toilet infrastructure as an investment rather than a fully subsidized handout;
- under what conditions could some form of incentive structure for communities be put in place to reach ODF as demonstrated in the USAID Laos Nurture project; and
- what the impacts of settlement patterns (living in compounds, for example) might have on uptake and coverage.

Topic 5: Delivering sanitation products and services in challenging contexts and in the context of climate change

Current programmatic approaches are not delivering the results needed in a range of challenging contexts. These include: (1) poverty, marginalization, and deliberate exclusion; (2) entrenched attitudes and social beliefs; (3)

tough physical environments; (4) lifestyles/livelihoods (including pastoralism, fishing communities, etc.); and (5) fragile contexts.

Rarely experienced alone, these categories intersect. Societies are complex with people living with multiple overlapping and compounding challenges that can reinforce the status quo. Intersectionality is demonstrated in the USAID/WASHPaLS study in the arid and semi-arid lands (ASALs) of Kenya (USAID 2021 [ASAL study]): Pastoralism and arid conditions with water scarcity and unstable soils are already two overlapping contexts. WASHPaLS also identified insecurity, extreme poverty and social beliefs as constraints to toilet access and use. Limited practical guidance has been found on ways to implement in these contexts at the speed and scale required to ensure safely managed sanitation for all by 2030 (Tillett and Jones 2021).

Work on climate change and sanitation also has highlighted that climatic stresses are likely to further divert attention and resources away from sanitation while damaging and destroying latrines (in the form of more frequent extreme precipitation events).

While avoiding "paralysis by analysis" and needing to ensure balance with action, a clear finding across all work cited is that undertaking context analysis and formative research (in addition to baselines) is an essential first step—with capacity anchored at both a national and sub-national level to use existing datasets and to identify design strategies to reach the unreached. Work on climate change highlights a need to incorporate an understanding of climate hazard impacts on local contexts, including details on social contexts; impacts on livelihoods, local activities, resources and markets; as well as impacts on physical access to sanitation and hygiene services (Kohlitz and Iyer 2021).

Participant Discussion and Key Takeaways

Also clear is the need for governments to support coordination efforts, potentially using a consortium approach at the local level that could combine forces and datasets across sectors (health, education, water, sanitation) and other social protection efforts. This could help increase program budgets and provide more nuanced guidance on support mechanisms, especially in areas where both the costs of safely managed sanitation and extreme poverty are high. Worth noting is that such an approach could mean that sanitation may not be the first priority and thereby need to be sequenced within a wider group of interventions.

Topic 6: Area-Wide Sanitation and supporting data solutions

Area-wide programming refers to the planning and implementation of rural sanitation service delivery for the entire population of a given geographic area. The intervention area should align with the mandate of those responsible for sanitation delivery. If responsibility lies with the local authority, the area should align with the local authority administrative boundaries. If responsibility lies with a health district, that should be the area. Area-wide programming must be led by the responsible agency, i.e., local authority, health district, or relevant technical agency. External interventions should align with the same area, strengthening the responsible agency and supporting all stakeholders in the area to fulfil their respective roles in delivering sanitation services.

Area-wide sanitation delivery should be tailored and responsive to the context and issues arising in the area. This includes geo-physical (including challenging soil or groundwater characteristics) and climatic context, socio-economic conditions, demographic and socio-political developments (including the influx of displaced populations or the exclusion of certain groups), among other factors. Some local contextual factors (like soil type) are static, and others are dynamic (e.g., population, sanitation service levels, and rates of open defecation or coverage). Responsible institutions are best served by timely information on these issues to take the right programming decisions. Helpful secondary information often is available, though not always accessible, and not always actively used.

Who needs what type of information for which decisions?

Local responsible authorities can be supported by external institutions to increase their capacity to both use existing information and generate quality data as they implement and oversee programs over time. Such efforts need to be integrated into and aligned with government driven data collection systems and ongoing monitoring systems that reflect reasonable frequency of collection at a reasonable cost. External institutions can also help to package and present data in a way that is compelling for policymakers as well as senior level officials at the local level. That said, they also need to recognize that numerous factors inform decision-making at the local level, many of which are beyond the narrower interests of those institutions focused specifically on rural

sanitation. Similarly, in many instances, local officials see data collection as a task for reporting upwards instead of valuing the potential uses of the data more directly at the local level. Thus, a shift is needed that sees data collection as a means to strengthen programming through a clearer emphasis on learning. Referring to the cascading accountability of the earlier discussion on local governments, national governments should also be encouraged to "feed back down", ensuring that local governments are benefiting from analysis at the national level.

Participant Discussion and Key Takeaways

When considering the perspective of an external intervention, three phases should be considered in terms of the kind of decisions to be taken and who uses what data (see Table 2). Learning event participants emphasized that efforts need to be made to understand a broader set of data that tell a story around the sanitation system as a whole. Considering the levels of sanitation access provides another perspective on the type of decisions needed and where data can be instrumental (Table 3).

Table 2. Data needs during different intervention phases.

Phase Perspective	Targeting of intervention areas (pre-intervention)	During intervention	Post-intervention / Continuous service delivery
Responsible institution (local authority or other)	Information about possible interventions and conditionality	Detailed information on progress & effectiveness for fine-tuning implementation of local area strategies	Information to respond to new emerging issues (like on those left behind, early signs of slippage & assessment of value chain activity)
External institution (national government, international agency)	Information to select areas for intervention and define the required level of effort Information about institutional arrangements (including capacity gaps of local authorities as well as presence of service providers), resource allocations, and other (current and previous) initiatives in the area	Detailed information on progress to fine-tune implementation of local area strategies as well as information on changes in sanitation service delivery at the national level	Information in support of increasing sustainability of sanitation gains Information to respond to new emerging issues (like on those left behind, early signs of slippage & assessment of value chain activity)

Table 3. Data needs during different coverage achievement phases.

	During the drive to expand coverage			After achieving full basic coverage
	Start of coverage drive (<20% access)	Bulk of coverage drive (20%- 80% access)	Last mile of coverage drive (>80% access)	After achieving full basic coverage (>98% access)
Information needs at each stage	Understanding barriers to achieving any amount of coverage	Scaling challenges Presence of other (potential) service providers Quality control issues Do No Harm risks	Characteristics of last mile Barriers for last mile access	Tracking slippage and identifying its causes (e.g., collapsing substructures)

Understanding what frameworks and tools are available and their key uses proves critical. This also will help determine minimum standards and/or recommended best practice in terms of data collection and monitoring for informed decisions in area-wide programming.

Drawing the conversation to a close

In closing, participants agreed that rural sanitation is in desperate need of attention. 27 percent of people practice open defecation compared to 19 percent of people using a safely managed service. (WHO/UNICEF JMP, 2021) Albeit with an imbalance of understanding of all the tools in the toolbox or the potential approaches that could be used (particularly for local government officials charged with ensuring universal access), dialogues such as these can help build a picture of different options as well as how the pieces fit together. That said, dedicated effort is required to ensure that global conversations strengthen the capacities, capabilities, and resources of those expected to implement and sustain outcomes and services.

As reflected in discussions on each of the topics covered, the imperative to meet targets and accelerate progress results in an insufficient emphasis on learning and trial and error, which are needed for a more systemic approach and exploration of integration. Rapid learning and reflection can lead to course correction or fine tuning.

Part of the challenge, however, is that the time needed for programs to be effective do not currently match funding modalities. Market-based sanitation initiatives, local government capacity development and systems strengthening take time and require longer-term vision coupled with longer-term investment. As it stands, implementers easily get caught up in the details of projects and programs and lose sight of how the different pieces (social inclusion, MBS approaches, financial support, and other aspects) fit together. Indeed, by joining the conversations together in this learning event, participants repeatedly found linkages among the different session topics which will help to make the case for increased attention and investment.

Of note, participants were not calling for a radical reinvention of the wheel – "we have the evidence of what works" – but there needs to be sufficient investment in monitoring (including post-ODF) and then the space to adapt in response to lessons learned as they emerge.

Throughout the discussions, participants noted several points. Regarding products and services, there is no silver bullet that provides a universal solution framed around a particular technology. Similarly, tools such as subsidies can complement but likely will not be a substitute for addressing the wide range of structural barriers to ensure and sustain access to sanitation services in rural areas. Paraphrasing one participant, those countries that have been particularly successful have focused primarily on the outcome and not necessarily a particular way to get there. This more iterative and open way of approaching and aligning around ensuring delivery of rural sanitation services needs to be more carefully woven into expectations of policymakers, funders and implementers alike. While understandable to focus on and emphasize ensuring access to rural sanitation services, the job is not complete until these expectations also incorporate the need for these services to be sustained over time.

Suggested reading per topic area

Topic 1. Achieving scaled and lasting rural sanitation gains

- Apanga, Paschal A., Matthew C. Freeman, Zoe Sakas, and Joshua V. Garn. 2021. "Assessing the Sustainability of an Integrated Rural Sanitation and Hygiene Approach: A Repeated Cross-Sectional Evaluation in 10 Countries." *MedRxiv Preprint*, 141–48. https://doi.org/10.1101/2021.08.11.21261919.
- Apanga, Paschal A., Joshua V. Garn, Zoe Sakas, and Matthew C. Freeman. 2020. "Assessing the Impact and Equity of an Integrated Rural Sanitation Approach: A Longitudinal Evaluation in 11 Sub-Saharan Africa and Asian Countries." *International Journal of Environmental Research and Public Health* 17 (5): 1–24. https://doi.org/10.3390/ijerph17051808.
- Sakas et al. (2021) Assessing sustainability factors for rural sanitation coverage in Kenya, Zambia, Nepal, and Bhutan: A qualitative case study analysis. medRxiv preprint. https://doi.org/10.1101/2021.08.24.21262558
- Trimmer J. et al. (2022). The impact of pro-poor sanitation subsidies in open defecation-free communities: A randomized, controlled trial in rural Ghana. *Environmental Health Perspectives* 130 (6): 67004. https://doi.org/10.1289/EHP10443.

Topic 2. Local governance

- Coultas (2021) *SLH Learning Brief (May 2021, Issue 9). Strengthening Sub-National Systems for Area-Wide Sanitation and Hygiene.*
- Wone (2021). *SLH Rapid Topic Review: Local Government Leadership for Sanitation and Hygiene in West Africa.*
- *IRC local governance master plans experience*
- SSH4A data on steering, quality assurance and alignment efforts by LGs (forthcoming from SNV)

Topic 3. Market-based sanitation

- Agarwal et al. (2020). Global assessment of grant-funded, market-based sanitation projects. *Waterlines 39 (2&3*). https://dx.doi.org/10.3362/1756-3488.19-00018
- USAID/WASHPaLS (2021). *Enterprise Viability Toolkit.* https://www.globalwaters.org/pages/sanitation-enterprise-viability-and-sustainability-toolkits
- Figure 3 from USAID/WASHPaLS (2021). *Research and Learning for Sanitation in Senegal Phase 1: Preliminary Findings*

Topic 4. Reaching the most vulnerable

- Trimmer J. et al. (2022). The impact of pro-poor sanitation subsidies in open defecation-free communities: A randomized, controlled trial in rural Ghana. *Environmental Health Perspectives* 130 (6): 67004. https://doi.org/10.1289/EHP10443.
- Cameron et al. (2021). Sanitation, financial incentives and health spillovers: A cluster randomised trial. *Journal of Health Economics* 77 (2021) 102456. https://doi.org/10.1016/j.jhealeco.2021.102456
- USAID and Save the Children (2021). *Ending Open Defecation in Laos: Program and Policy Recommendations from the USAID Nurture Project to Increase Household Toilet Use*
- Hoo, YR et al. (2022) Strategic complements: poverty-targeted subsidy program leads to positive spillover effects on private toilet purchases in rural Cambodia. *PLOS ONE* 17(6): e0269980; https://doi.org/10.1371/journal.pone.0269980

Topic 5. Delivering in challenging contexts and in the context of climate change

- Tillett, Will, and Oliver Jones (2021). "Rural Sanitation Programming in Challenging Contexts: A Desk Based Review." 11. SLH Learning Paper. Brighton.
- USAID/WASHPaLS (2021). *Approaches for sanitation access in pastoralist areas within the arid and semi-arid lands of Kenya.* https://www.globalwaters.org/resources/assets/approaches-sanitation-access-pastoralist-areas-within-arid-and-semi-arid-lands

Topic 6. Area-wide programming and data science solutions

- Robinson, A. et al. (2019) for UNICEF. Guidance on Programming for Rural Sanitation and M&E framework and guidance
- USAID/WASHPaLS (2021). *SanPlan tool*. https://sanplan.app
- SNV, 2019, SSH4A Performance monitoring framework, Part 1. Introduction and impact indicators, The Hague, SNV
- SNV, 2019, SSH4A Performance monitoring framework, Part 2. Outcome indicators, The Hague, SNV

Further Related References

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