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The present summary report was written by Samuel Bickel and Jérémie Toubkiss and enriched by comments from the UNICEF WASH Section at UNICEF Headquarters in New York: Chief of WASH Sanjay Wijesekera and senior WASH advisors Guy Hutton, Cindy Kushner, Cecilia Scharp and Michael Emerson Gnilo. Consultant Alexis Martin provided copy-editing.
EXECUTIVE SUMMARY

Water, sanitation and hygiene (WASH) has been a core sector of UNICEF programming for decades, is a focus area in the UNICEF Strategic Plan 2014-2017 and will remain a focus area in future UNICEF strategic plans. UNICEF supports governments, communities and other private and non-profit stakeholders to attain universal coverage of these vital basic services. UNICEF advocates for national policy development, supports the building of capacity at all levels and provides technical assistance for field-level programmes to support the realization of national WASH objectives.

This evaluation synthesis examines three critical cross-cutting concerns that must be managed within WASH programming, and indeed within programming in any sector. These are achieving equitable access for all but especially the most excluded populations; going to scale to attain the maximum necessary coverage; and ensuring the sustainability of the positive changes achieved. The synthesis examines these themes particularly in the sub-sectors of rural water supply, sanitation and hygiene, and WASH in schools.

This synthesis is the first of its kind to examine these three cross-cutting themes, all of which have been focuses of WASH attention over the past decade and will remain focuses during the Sustainable Development Goals (SDGs) period of 2016–2030.

The report distils lessons from 64 high-quality evaluations and 10 sustainability check exercises completed by UNICEF offices between 2008 and 2015. The report provides a brief overview of WASH work and the importance of equity, scalability and sustainability to the sector. It presents the evidence base for the synthesis and examines results attained over the period 2007–2015, which corresponds with the UNICEF WASH strategy approved by its Executive Board in 2006.

The overarching finding is that although there have been impressive achievements in all three areas, there are major gaps in understanding and practice that must now be addressed in the SDG era. Recommendations are made to strengthen WASH programming to achieve equity, scalability and sustainability objectives, and to improve the quality of the WASH evidence base for these cross-cutting concerns.
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SECTION 1: INTRODUCTION – WASH PROGRAMMING EMPHASSES OF THIS REVIEW

As per its evaluation plan (2014-2017), the UNICEF Evaluation Office annually presents a synthesis of evaluation findings from one of UNICEF’s outcome areas. The syntheses are valuable for a variety of internal and external users and partners as they identify what works in that outcome area and what needs further testing and refinement. The 2016 evaluation synthesis focuses on the area of WASH.

WASH

In the UNICEF Strategic Plan 2014-2017, WASH promotion is a specific outcome area. UNICEF WASH programming is aimed at improved and equitable use of safe drinking water, sanitation and healthy environments, and improved hygiene practices. UNICEF actively supports the following areas through advocacy and programming:

1. Water supply and the environment;
2. Sanitation and hygiene, especially through the Community-Led Total Sanitation (CLTS) approach and handwashing promotion;
3. Water and sanitation in schools and, to a lesser extent, in health centres; and
4. WASH in emergencies.

The present review focuses on the first three elements and does not assess WASH in emergency programming.

WASH has long been an important part of UNICEF’s advocacy and programme work. UNICEF’s role in WASH dates back to the 1960s, and there has been a steady increase in the organization’s WASH activities since then. The first UNICEF WASH strategy was approved by the UNICEF Executive Board in 1995 and the second strategy was approved in 2006. A new strategy is being finalized for the period 2016-2030. In 2015, UNICEF spent more than US$868 million on WASH in 107 countries globally, making it the third largest area of investment after health and education. Of this total amount, 35 per cent was spent on WASH in emergencies, 18 per cent on water supply, 14 per cent on sanitation and hygiene and 7 per cent on WASH in schools. The remaining 25 per cent is categorized as ‘general’ WASH.

A WASH focus on equity, scalability, and sustainability

There are many aspects of WASH programming that could be covered in a synthesis review. Among those referred to in this summary but not covered systematically are the following:

1. Technology;
2. Contracting procedures;
3. WASH and economic growth; and

This review focuses on three themes critical for the long-term relevance, coverage and durability of WASH programming now and in the future. These are the following:

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1. Equity: Equity means that the resources, goods, services and opportunities produced by the WASH programme shall benefit deprived, vulnerable or marginalized groups, based on their needs and priorities, with the intention of reducing existing inequalities between these groups and more favoured populations.

2. Scalability: Scalability refers to the ability and likelihood of a WASH programme to expand from a limited scale to a larger reach. The goal is normally to reach all communities and populations that have not yet been reached by the programme or to pursue a similar strategy endorsed by the national authorities. For geographic and other reasons, the desired scale may be less than national.

3. Sustainability: Sustainability is the ability of the programme outputs, outcomes and impacts to persist after the withdrawal of all forms of assistance from the external development agency. This review looks at evidence from one year after the end of the external assistance as the time from which sustainability can begin to be assessed.

The rationale for the synthesis focus on equity, scalability and sustainability is that these three aspects were included as key components in the UNICEF Executive Board-approved ‘UNICEF water, sanitation and hygiene strategies for 2006-2015’, and as a result were expected to guide UNICEF programming in the field. These concepts will become even more important given that they are at the core of the SDGs. The overall aim of SDG-6 is to “ensure availability and sustainable management of water and sanitation for all”. SDG-6 targets 1 and 2 are to “achieve universal and equitable access to safe and affordable drinking water for all” and “achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations” by 2030.

The UNICEF WASH programme section agreed that a synthesis of lessons from completed evaluations would enlarge its knowledge base and facilitate the development of the revised global WASH strategy, which will guide its action toward the SDGs for the period 2016–2030. Moreover, a sufficient volume of evaluations has been conducted to enable the identification of globally relevant lessons.

For more detailed information on UNICEF WASH programming objectives, the countries where UNICEF works, the WASH sub-sectors, and the past and future role of WASH in the Millennium Development Goals (MDGs) and the SDGs, see <www.unicef.org/wash>.
SECTION 2: THE EVIDENCE BASE OF THE SYNTHESIS

The synthesis draws its evidence primarily from evaluations that have been completed by UNICEF offices. Additional data has been used from WASH sustainability checks, a related quality control exercise.

The information base for the review

The review includes evaluation reports of UNICEF-supported WASH programmes commissioned by UNICEF between January 2007 and July 2015. A total of 112 reports from this time period were identified. Criteria were applied that reduced the number retained for in-depth analysis in this review to 64 evaluations and 10 sustainability check reports. Evaluations were excluded if their quality was rated as unsatisfactory or if they covered WASH responses to emergencies that were not intended to be scaled up and sustainable. The synthesis also excluded non-education sector evaluations that covered a small amount of WASH content; education was retained for the WASH-in-schools theme.

The 74 reports included in the review cover all UNICEF regions, all countries with major WASH programmes, all years in the considered period, and all types of WASH interventions. The total number of reports reviewed is considered an adequate number; in contrast, prior syntheses of other sector evaluations have been conducted with as few as 38 reports. The title, region, commissioning office and year, as well as the independent external quality rating, are given for each source document in the Annex to this evaluation.

Although not all reports cover all of the themes of interest, each theme was broadly covered in the large majority of the reports, as shown in Figure 1. Figure 2 shows the geographic coverage of the reports, in line with UNICEF’s regions. Figure 3 presents the sub-sectors addressed in the reports.

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2 Note that some reports present material across multiple themes.
3 Note that some reports present material across multiple sub-sectors.

Conduct of the review

The review was conducted by the WASH Evaluation Specialist in the UNICEF Evaluation Office, with support from a small team of consultants during the text analysis phase. WASH sector professionals commented at several stages of the work but the Evaluation Office retained full control over the findings, recommendations and authorship of the report.

The evidence was analysed to see where there was the greatest density, consistency or singularity in the findings. The exercise of looking for patterns and recurrent or contrasting
findings reduced the risk that anecdotal, inconsistent or potentially weak evaluation evidence would be used to draw general conclusions.


The present document is a shortened version of that long report. It was written by two Evaluation Office staff members, the WASH Evaluation Specialist and the Senior Advisor for Evaluation and Research. The document has benefitted from extensive discussions held with the WASH team since the completion of the full review, and therefore, in some cases, the presentation of findings, conclusions and recommendations have evolved beyond what is articulated in the original report. In order to remain within expected space limits for a summary of this nature, this report often presents a sample of the full range of findings, examples and analysis presented in the full synthesis. Please refer to the full report for the complete findings, examples and analysis.

**Strengths and weaknesses**

Overall, the evidence base is considered strong. The main limitations of this review include the following:

1. The original source evaluations were rarely focused specifically on equity, scalability or sustainability.
2. The number of reports, though large, is insufficient for detecting systematic variations that may arise across programme size, maturity or location.
3. The geographic distribution under-represents UNICEF WASH work in regions where the emphasis is on policy advocacy rather than field-level programming.
4. It was not possible to access primary data to verify the accuracy of the analysis of the evaluators.
5. Most importantly, a systematic and standard approach to equity, scalability and sustainability analysis is lacking.

Point number 5 reflects the fact that UNICEF and, in fact, the evaluation profession, have not yet developed a consistent toolkit for evaluating these themes. At times, this made it difficult to judge whether the absence of certain key information related to these themes revealed a deficit in the programme itself or an oversight in the programme evaluation report.

The review also demonstrated the following strengths:

1. All unsatisfactory evaluations were intentionally excluded from this review. Many of those retained received ‘highly satisfactory’ quality ratings for their research, design and execution.
2. All regions, each of the themes and each of the three sub-sectors are well represented.
3. A total of 41 countries are covered by the meta-analysis, including the top 15 countries with the highest non-emergency WASH expenditures since 2007.
4. Most of the evaluations cover multi-year and multi-component programmes (as opposed to projects with a narrow focus and short timeframes).
5. The reviewers tried to draw only on the most solid evidence and to highlight the most consistent findings.
When considering this report, readers should keep in mind that the three themes examined were selected precisely due to the lack of consolidated learning about them in WASH programming, and that this is one of the earliest collations of material on these critical topics. Each is in fact a 'cross-cutting theme' that has never been examined within UNICEF (in any sector) in an evaluation-based learning exercise. The Evaluation Office believes that the findings and analysis that emerge from the review are a credible addition to the learning toolkit, as well as an important contribution to the WASH sector.

**Presentation of the results**

Sections 3, 4 and 5 use a standard template to report results, as follows:

**Findings** summarize the findings made within the source material. The findings have sometimes been organized in a way that is not seen in the original reports, but that fairly represents what the body of evidence as a whole illustrates.

**National examples** illustrate the findings with real life cases. These have been rendered in less technical language for ease of communication.

**Analysis** presents the review team conclusions regarding the relevance of the findings for UNICEF and the WASH sector.
SECTION 3: RESULTS – WASH AND EQUITY

As defined earlier, equity means that the resources, goods, services and opportunities produced by the WASH programme shall benefit deprived, vulnerable or marginalized groups, based on their needs and priorities, with the intention of reducing existing inequalities between them and more favoured populations.

The population groups of greatest equity interest in the review were the following: the poor and most deprived; women and girls; the hard to reach; elderly and disabled people; and those facing heightened risk due to the effects of climate change. In some cases, the evaluations also looked at other vulnerable populations. More than 90 per cent of the reports reviewed (67 of 74) contained equity-relevant analysis.

Section 3A: WASH equity and the programme cycle

UNICEF’s programming guidance asks country offices to address equity issues at each stage of the programme cycle. The main approaches across the cycle are the following: using the situation analysis to identify equity issues; targeting the intervention geographically with an equity lens; facilitating the involvement of less powerful populations in programme design and implementation; and using an equity-lensed monitoring and evaluation system. When used together, these approaches are designed to reduce social inequities.

Findings:

1. Evaluations rarely assessed how well situation analyses had explored the obstacles faced by those with difficulty accessing WASH services. A few country offices sponsor specific WASH equity studies to gain this understanding.
2. Only 25 per cent of the evaluations documented a well-conceived, equity-focused geographical targeting strategy to identify and reach the most in need. The other 75 per cent did not comment, showed no specific strategy or actually targeted relatively better-off areas in terms of income or WASH conditions. Other than vulnerability, the variables they considered included desired coordination with other health, nutrition, education or humanitarian interventions; complementarity with other donors; prior work in the region; easy access; and political considerations, especially when national governments were part of the decision-making process.
3. A number of programmes included some equity dimensions in their implementation, with a focus on women, girls and the poorest, notably in the technical design for WASH infrastructure and in the management modalities of community water points and WASH in schools.
4. Evidence on the results or success of these equity measures is rare except in regards to women, and mainly based on qualitative data and self-reported due to the lack of equity-framed monitoring systems. Only three evaluations mentioned data sensitivity to equity parameters such as wealth, age, disability, belonging to a minority and HIV status.

Examples: Kenya conducted a 2011 equity-diagnostic review of its Country Programme to better understand the obstacles faced in accessing and affording WASH services. Special considerations were identified for the very poor and for pastoralists in arid and semi-arid regions. A deprivation index was created and communities scoring high were prioritized in the implementation phase.
In **Bosnia and Herzegovina**, UNICEF helped partner municipalities develop a more equity-lensed picture of their communities and target their social assistance to the most deprived groups. Databases were created by each municipality to identify poor families with children, children with special needs and elderly and disabled people without family support. Special grants, subsidies on the water tariffs, or water equipment were provided depending on their needs.

**Zimbabwe** set up its WASH programme monitoring system based on equity-sensitive indicators and routinely collected data on beneficiaries, disaggregated by gender, age, disability and HIV/AIDS status.

**Analysis:**

**#1: WASH planners sometimes have to choose either equity or efficiency when both cannot be achieved.** The trade-off is obvious in terms of the higher costs involved in servicing remote communities, but also exists when there is a natural desire to integrate WASH with health services or to revisit former programme sites with sustainability problems. The ‘value-for-money’ calculus can be much higher when working in communities that have service access compared with those that have none.

**#2: Increased participation in WASH programmes faces social obstacles.** The poorest, women and others who are disadvantaged in WASH management structures face obstacles to their participation, including lack of education, social exclusion from the decision-making process, self-marginalization and lack of time. Equity-based participation is therefore not usually achieved across programme dimensions, including site selection, management and accounting arrangements, tariff setting, training opportunities and income-generating activities.

**Section 3B: WASH equity by demographic group**

Findings: Equity results are strong in certain cases but limited or invisible in others.

1. **Women** are undoubtedly the main beneficiaries of all three types of WASH interventions. Women record notable satisfaction with these interventions, particularly with improvements in personal security with the elimination of walks to remote water sources; the reduction in the labour needed to haul water; and the heightened privacy/dignity afforded by latrines. UNICEF has consistently incorporated the gender dimension into its WASH programming through two main measures: the participation of women in village water and/or sanitation committees and school clubs; and the construction of gender-segregated latrines in schools. Other gender-specific approaches are rarely seen.
2. **The poorest benefit**, in particular, from water supply and sanitation interventions. They benefit as a result of their proportionately large presence among underserved communities, and through internal community support for reduced water tariffs or latrine construction.
3. Evidence on the impact of community water supply or WASH-in-schools programmes on girls’ education is neither robust nor consistent across countries. This lack of demonstrated impact was found for a range of indicators, including school enrolment, absenteeism, dropping out and academic success.
4. **Disabled people** benefit from household latrine initiatives, which eliminate the need to travel long distances. However, only 15 per cent of evaluations examining the general inclusiveness of WASH infrastructure took the specific needs of the elderly and/or disabled into account.
into account. Disabled access to school latrines was fostered in 66 per cent of the evaluated programmes, compared with 3 per cent for community and school water points.

5. There is little evident planning for a range of other potentially equity-challenged populations beyond the poor, women and the disabled. These other potential populations of concern include those that are likely to be commonly present (religious minorities (zero mentions across all reports); ethnic minorities/indigenous peoples (two mentions); and peri-urban and slum dwellers (five mentions)); and those that are present only in rarer and more specific contexts (pastoralists (one mention); lower caste members (one mention); people living with HIV/AIDS (one mention); and real/potential victims of climate change (one mention)). The effects of UNICEF WASH programmes on the condition of these more and less common groups is largely unknown.

**Examples:** WASH programmes were praised for appropriately targeting and engaging with remote populations in the Sudan, with regions vulnerable to disasters and climate change in Kenya, and in post-flood areas in Pakistan. UNICEF’s institutional expertise supported partners to overcome obstacles related to logistics and associated costs, inadequate supply chains and insecurity.

In Timor-Leste provision was made to improve the inclusion of physically disabled persons by ensuring wheelchair accessibility to school latrines and water system standpipes. In some villages, standpipes were situated closer to the homes of disabled people. Zimbabwe specifically targeted people affected by HIV/AIDS, particularly for the promotion of good hygiene practices.

Kenya and Pakistan found that latrine interventions added to women’s workloads as they become responsible for cleaning latrines and fetching additional water required for flush latrines or handwashing stations.

Peri-urban and slum dwellers in Liberia and Kenya were easy to reach in terms of proximity but challenging to serve with hardware, notably due to land tenure issues. Indonesia adopted a targeting strategy that includes schools on isolated islands and remote inland areas, resulting in logistical and implementation challenges and much higher unit costs.

**Analysis:**

#3: WASH need correlates with equity interests. Communities underserved or unserved by water or latrine services normally have a very high percentage of poor persons and women. This yields good equity results. In equity planning terms, this payoff is often magnified by community solidarity mechanisms extending the benefits to the very poor through the labour and cost bearing of their neighbours.

#4: UNICEF and partners have not adequately investigated the needs of populations other than the poor, the disabled and women. The consistent inattentiveness within the evaluations to issues such as minority group membership, pastoralism, age and HIV/AIDS status means that UNICEF lacks a robust knowledge base for how to address these issues in WASH terms. It is not certain that their needs diverge from the population as a whole, but this should be examined.

#5: Special efforts are needed to cope with the needs of the disabled and the elderly. Lack of experience means that households can rarely design and build a latrine to serve their disabled members. Households need external facilitation to design and build adapted latrines.

Section 3C: WASH equity by sub-sector

This section focuses on how equity outcomes are influenced by choices in technology, programme economics and management, and communication strategies. It is understood that these are not the full set of factors that WASH managers must engage with but that they do represent some of the more complex elements and ones whose links with equity outcomes are often not fully comprehended. For reasons of space, just one sub-sector is highlighted in each of the three findings areas.

Findings:

Technology and intervention design (WASH in schools)

1. Girl-friendly latrines with gender-segregation, appropriate siting, elevated walls, adequate features for menstruating girls, etc. were designed in about 67 per cent of school WASH programmes evaluated. However, some evaluations noted a lack of access to water in girls’ latrines and lack of means to dispose of pads or similar products, indicating either a failure or a knowledge gap in terms of appropriate assessment and design.

2. Inclusive WASH facilities alone do not solve the problem of access for children with disabilities. In many cases, the classrooms, school grounds and transportation/access modes are not disabled-friendly. Some nations try to solve a variety of accessibility issues by guiding children with disabilities to specifically-adapted schools.

Economics (rural water supply)

3. UNICEF has often prioritized rural water access and affordability over the sustainability of the service. The organization has typically provided water points without beneficiary community contribution to the capital cost and without a well-conceived approach to water tariff and cost-recovery.

4. Low initial costs are often combined with few or lack of clear principles regarding water tariffs, even when government policies provide such guidelines. UNICEF has not commissioned any ‘willingness to pay’ surveys in any of the evaluated WASH programmes. Moreover, training for WASH committees on how to design the appropriate tariff with cross subsidies for the poorest users are uncommon.

Communication (hygiene and sanitation)

5. The communication strategy for open defecation-free (ODF) programmes works very well. All groups consistently report good community engagement. Hygiene messages and facilitation methods are adapted to the capacities of poor and less educated people, as they are mainly based on observation exercises and common sense rather than elaborate explanations of disease contamination and vectors of transmission. Radio-, television- and internet-based mass broadcasting primarily reaches literate, upper caste and higher socio-economic groups, however.

6. Only one evaluation mentioned the practice of intentional shaming, threats of sanctions or actual penalties against those who do not build latrines. Contrary to fears expressed in the professional literature, there is no indication that these practices exist in CLTS programmes supported by UNICEF.
Examples: In Nigeria, the setting of an appropriate water tariff was left to the decision of the local communities without being based on a cost recovery approach. Equity concerns were taken into consideration in many communities, which in some instances decided to charge households based on the number of cows they own. This was achieved at the expense of the longer-term viability of the water service, however.

In the Odisha state in India, cases are cited where the CLTS-related mobilization process was so effective that in some villages it led to significant changes beyond sanitation, including the reorganization and revitalization of women’s groups, improvements in community water management and an alcohol prohibition.

Analysis:

#6: Weakness in programme economics, especially for water supply: It is not pro-poor if a programme intervention stops functioning because finances were not set on a sustainable basis from the start. The reluctance to engage meaningfully in issues of tariffs and community investment—to the extent of ignoring ‘willingness to pay’ studies and government approval of tariffs—undermines the long-term interests of the poor.

#7: The power of positive motivation: The mass engagement behind ODF programmes has been obtained by mobilizing community pride and determination to rid their environment of contamination. The sociological thinking behind the communication and mobilization strategies—the ‘social norms’ approach—is a useful model for other WASH sub-sectors to reflect on.
SECTION 4: RESULTS – WASH AND SCALABILITY

As defined earlier, scalability refers to the ability and likelihood of a WASH programme to expand from a limited scale to a larger reach. The goal is normally to reach all communities and populations not yet reached by the programme or to undertake a similar strategy endorsed by the national authorities. For geographic and other reasons, the desired scale may be less than national.

Finding ways of going to scale without compromising quality and sustainability is critical, particularly given the new SDG agenda aiming at universal WASH coverage by 2030. More than 78 per cent of the reports reviewed (58 of 74) contained scalability-relevant analysis.

Section 4A: Models of going to scale and interest in scalability in evaluation reports

Findings:

1. Scale is reached by the spread of the programme across the national landscape. The evaluations documented three ways in which WASH programming spreads:
   a. By spontaneous diffusion in which households, communities or governmental levels appropriate the intervention with no or very limited external intercession;
   b. Through an intentional, organized replication of projects developed by UNICEF, its implementing partners, the government or other development agencies; and
   c. Through institutionalized uptake through a consciously planned, mainstreamed and managed strategy using directed programmes and capacitated bureaucracies matched with civic mobilization and mass media efforts.

2. The overwhelming majority of WASH programmes are supported to spread through organized replication and institutionalized uptake. Spontaneous diffusion occurs but is not well documented or even understood as a potential spreading strategy.

3. Both the institutional uptake and organized replication models are in widespread use. The scaling up of water supply is relatively capital and skill intensive. Water planners have historically focused on institutional uptake as the means to go to scale. The lower capital and skill requirements of the CLTS approach has made a combination of institutional uptake and organized replication more feasible.

4. Scalability is never addressed in a dedicated section of the evaluation reports, even though 78 per cent of the reports contain relevant analysis. Scalability is either discussed within the sustainability section or discussion is diffused throughout the entire report. These discussions rarely examine the negative cases of programmes constrained to a limited scale and why or how this happens. No UNICEF-wide, sector-wide or national standards or benchmarks were used to judge whether or not a programme has reached a significant scale.

5. Two-thirds of the reports reviewed discuss the likelihood of whether the intervention will be scaled up. Only one third of the reports document actual scaling up. Fewer than 10 per cent of the reports explored reasons why WASH interventions have not gone to scale.

6. Slightly more than 50 per cent of the reports reviewed pertain to CLTS interventions. The scaling up and scalability of WASH-in-schools interventions are less often discussed, and of the scaling up and scalability of water supply interventions are discussed even less frequently.

Examples: The *Global Evaluation of the Community Approaches to Total Sanitation Strategy* is the only one that has attempted to measure the scale of a programme (CLTS), identify various processes for going to scale, and investigate the enabling factors as well as the constraints to scaling up. Regarding spontaneous diffusion, the evaluation concluded that “cases of self-triggered communities or of communities getting support from technical departments, health extension workers or natural leaders in reaching ODF status without external funding are rare if not non-existent”. In Zambia, village committees supported interested neighbouring villages to increase readiness and awareness for ODF programmes. Actual implementation required project support, however.

UNICEF has thus far not commissioned evaluations of Global Handwashing Day activities or of the Public-Private Partnership for Handwashing with Soap programme despite the existence of an impact assessment toolkit published in 2010.

Analysis:

#8: UNICEF is operating without an explicit conceptual model for going to scale. For the purpose of this analysis, scattered findings had to be gathered and presented in a more structured fashion than occurred in the evaluations. As discussed in Section 4B, however, there appears to be an implicit model adhered to in WASH programming.

#9: There is abundant programme evidence that could be investigated. Considering just the organized replication model, the following strategies were seen in CLTS programmes under evaluation: awareness raising events such as community and school meetings, inter-village and inter-district meetings or ‘fairs’; model villages; media ceremonies; networks of leaders with rewards for those taking successful initiatives; and national networks of community-based organizations. Yet very few evaluations have investigated the effects of these activities.

**Section 4B: Determinants of going to scale**

**Findings:**

1. Although evaluation reports do not address scalability issues holistically, they repeatedly touch on a set of determinants. The aspects of this implicit model are shown in related clusters:
   a. Existence of an effective and scalable approach, including a full technical repertoire of implementation guidelines and tools
   b. Reducing unit costs to a level potentially affordable given the resources of the nation
   c. Availability of funds
   d. Mainstreaming in national policies
   e. Mobilization and leadership of national partners
   f. Institutional arrangements and coordination among government, development partners (including UNICEF), local authorities and implementing partners
   g. Capacities at all institutional levels
2. In almost all settings, there is a technically effective approach available that can be applied at scale.

3. Unit costs are a serious constraint for water supply and school latrines in many settings. Only the CLTS approach offers very low-cost barriers that present almost no obstacle to community resource levels.

4. Funding mechanisms are a consistent weakness. Few countries with significant WASH funding have successfully established a mechanism for pooling funds from multiple donors financing a single programme at large scale across all supporting partners and for a longer period.

5. Advocacy efforts to support scaling up often occur too late in the timeline of WASH programme implementation. While WASH managers prefer to promote only those approaches that have been successfully piloted, waiting too long results in the donor-funded elements of the programme ceasing before the institutional and financial arrangements for scaling up are in place.

6. Implementation quality is examined in many evaluations, reflecting a high level of UNICEF investment and attention. Major bottlenecks persist that inhibit going to scale, including counterpart capacity gaps and lack of clarity on institutional roles, sometimes leading to gaps or duplication.

7. Engaging potential beneficiaries is a consistent strength even when demand for improvements is weak, as is the case with sanitation and hygiene. In many CLTS programmes, particular attention is given to identifying and training ‘natural leaders’, that is, trusted community members who emerge spontaneously during the mobilization and whose dynamism and charisma inspire others.

**Examples:** Authorities in Bolivia, Ghana, Nepal, Nigeria and Pakistan financed the roll out and scale up of the CLTS/ODF strategy.

Partners that had previously worked in ‘silos’ in development settings increased coordination and acted at a much larger scale in the Democratic Republic of the Congo, Guinea, Guinea-Bissau, Mali, Pakistan and Zimbabwe. The need to react to humanitarian crises was the impetus for working together effectively.

**Analysis:**

*#10: Larger scale disturbs what works well at a smaller level.* Each of the issues addressed in the institutional uptake model—policy, capacity, funding, technical suitability, etc.—is managed within UNICEF WASH programmes. Yet programme level success rarely predicts success at scale, indicating that new and harder-to-resolve complexities emerge. This realization is one reason that going to scale has become an object of specific study in development research.

*#11: Adherence to old models impedes scalability.* Developing at-scale funding mechanisms is consistently challenging. This is partly attributable to the available partnership agreements. Direct cash transfers, special service agreements, small-scale funding agreements and their associated procedures are not adequate for large financial volumes, large scope and long durations. Such tools are meant for implementing partners and service providers rather than for large-scale partnerships among governments and contributing agencies.
Section 4C: Going to scale by sub-sector

For reasons of space, only one determinant is highlighted for each sub-sector.

Findings:

Funding and unit costs (water supply)

1. Governments of lower-income countries perceived as seriously attempting to reach the MDG targets for water supply benefitted from strong global support. Middle-income countries and those with weak government leadership were more likely to remain heavily dependent on a small number of modest funding sources that yielded uncertain long-term plans.
2. Quality and sustainability posed problems for scaling up as rehabilitation works often diverted available funds from actual expansion of the water coverage.
3. Many WASH programmes experience high unit costs, especially in low population density rural areas of sub-Saharan Africa reliant on boreholes or small piped water schemes. The evaluations calculated a unit cost ranging from US$10–50 per person served.
4. Recent developments in low-cost, self-supply approaches were not evaluated during the study period. These developments include manual drilling that use local skills and resources to build shallow boreholes in favourable areas.

Policy mainstreaming (sanitation and hygiene)

5. The existence of a low unit cost and easily replicated CLTS intervention set the stage for policy mainstreaming efforts. This helped advocacy efforts succeed in mainstreaming CLTS into long-term national policies and strategies, including many instances of governments re-orienting their national sanitation policies away from existing models toward CLTS.
6. Specific actions were often taken to operationalize the policy commitment. Government-organized workshops helped in-country agencies reconcile their terminology, implementation modalities, technical standards, certification criteria and monitoring indicators. Harmonized step-by-step implementation manuals were developed. Progress monitoring became a collective endeavour in many countries.
7. Policy alignment was consistent neither within countries nor across countries. The main difference was the persistence of diverse types of household subsidies and results-based rewards. This is usually justified on equity grounds when targeted to the poorest or as an incentive to reach ODF certification.

Institutional arrangements and coordination (WASH in schools)

8. The relatively high costs are a barrier to taking WASH-in-schools to scale even though the technologies are proven (e.g. hand pumps or small water systems, latrine blocks). This is particularly the case in low-income countries where WASH conditions in schools are poor and the needs are great.
9. Institutional bottlenecks often surface even when a WASH in schools policy has been endorsed. Ministries of education lack internal WASH expertise and collaborate weakly with the WASH and health ministries. Education itself often fails to manage internal collaboration among those in charge of primary and secondary education, infrastructure, school health and environment, etc. In addition, communication and coordination between the national and sub-national levels is often erratic.
10. Better performance often emerged when education departments received technical support to align with the agreed policy. National and international non-governmental organizations were trained or provided with technical advice that enabled them to function as cooperative partners with public ministries.

**Examples:** In Ethiopia and Mauritania, UNICEF worked using a stepwise approach with experts and non-governmental organizations to explain and demonstrate the effectiveness of the CLTS approach to senior decision makers. This helped overcome initial misunderstanding and resistance, and paved the way to scaling up.

In Burkina Faso, UNICEF attempted to reduce the overall cost of school WASH facilities through an increased contribution of beneficiary communities during the construction phase; this effort met with mixed success. In Mali, the same goal was pursued by increasing the ratio of pupils to latrines.

The low-cost ‘Three Star Approach’, which promotes an incremental change in school WASH conditions and the use of low-cost interventions as a starting point, has been advanced in a number of countries more recently and so has not yet been evaluated by UNICEF.

**Analysis:**

**#12: Equity and scalability can conflict.** Subsidies may appear to be a pro-poor response, but in regards to sanitation, there are examples within the evaluations of strong unintended consequences, such as increased implementation costs and in some cases, increased dependency among all economic strata. Philosophically, subsidies countermanded the principles of self-help and community empowerment. Global evidence shows that communities aware of subsidized projects in neighbouring areas did not want to absorb the greater costs required under CLTS programmes, negatively affecting CLTS scale up.

**#13: Research and evaluation investments are not keeping up with innovations that could reduce bottlenecks.** The absence of evaluations of low-cost self-supply water technologies, low-cost WASH-in-schools interventions, sanitation marketing, water safety planning and, as described in Section 4A, the organized replication model, indicate that UNICEF’s actual learning lags behind its learning potential.
SECTION 5: RESULTS – WASH AND SUSTAINABILITY

As defined earlier, sustainability is the ability of the programme outputs, outcomes and impacts to persist after the withdrawal of all forms of assistance from the external development agency. This review looks at evidence from one year after the end of the external assistance as the time from which sustainability can begin to be assessed.

Most of the WASH programming examined in the evaluations had been conducted via a project or programme mode. This typically invests concentrated resources over a short- or medium-term period and concludes with a range of new infrastructure, processes and behaviours in place. It is desired that these new resources—as well as the existing ones that may have been present—continue to operate at full effectiveness. However, a variety of forces can cause these new resources to lose some or all of their technical functionality or cause a loss of adherence by the population to the new behaviours. Therefore, sustaining performance over time as opposed to attaining it in the first place is a critical issue. Sustainability risks have been identified in many sectors as a persistent threat to meeting social developmental goals.

All the reports in the review (74 of 74) contained sustainability-relevant analysis. Sustainability is typically addressed in a dedicated section.

Section 5A: Models of sustainability

Findings:

1. Across settings and sub-sectors, the following four elements were always used to judge sustainability:
   a. That the infrastructure is still present and is functional;
   b. That it is being used;
   c. That usage continues across ‘generations’ (i.e. new classes of students, new members of the community); and
   d. That management arrangements are in place to oversee the operation and maintenance of the infrastructure.

2. Additional elements are normally examined, but with much more variability, by setting and sub-sector. Although they are part of the model, the standard for being successful is not as consistent as the four elements in Finding 1. These additional elements are:
   a. The actual behaviour to be sustained: Hygiene sustainability, for example, varies greatly depending on whether it is defined as latrine use only (high adherence) or as latrine use plus handwashing with soap (low adherence).
   b. The expected level of functionality and adherence over time: While some ‘slippage’ is expected, the amount and pace of slippage and the level of the steady adherence can vary.
   c. The expected level of financial and technical independence: A key issue is whether the community or nation is expected to be completely independent of outside support, including for the long-term recapitalization of the infrastructure.

3. These factors can lead to very high variability and lack of comparability across settings. Water system sustainability is most often measured by the functionality rate of the water point at any given time, regardless of the age of the infrastructure, and yields normal readings of 60–90 per cent with a decrease over time. Similarly, when the existence and use of a
handwashing station is considered, the level of ODF sustainability decreases from 80 per cent adherence on average (latrine usage) 1–5 years after certification, to 5–25 per cent (latrines plus washing hands with soap or ash).

**Examples:** An impact evaluation of WASH in schools in Mali found that the practice of open defecation actually continued to slowly decline between the completion of the intervention (when open defecation was observed in 20 per cent of beneficiary schools) and more than two years later when it had declined to 10 per cent. While the level of adoption of handwashing with soap was found to be much higher than in other handwashing promotion programmes, the observed presence of water and soap decreased from 68 per cent to 57 per cent over the same time interval.

**Analysis:**

*#14: The evidence base for sustainability is more robust than for equity or scalability.* Sustainability benefits from being a standard Organisation for Economic Co-Operation and Development—Development Assistance Committee criterion for evaluations and is used as such in all UNICEF WASH evaluations. It also benefits from the recent roll out of sustainability checks across sub-Saharan Africa, especially by governments cooperating with certain implementing partners. The conditions for greater standardization and comparability are present.

*#15: Attention is needed for both effectiveness (initial conversion) and sustainability (slippage) of handwashing promotion strategies.* Handwashing with soap is much more of an effectiveness than a sustainability issue. The 5–25 per cent adherence rate is the normal maximum attained after intensive promotion. WASH stakeholders need to focus more on increasing adherence (conversion from old behaviours) than on sustaining the low success rate. In contrast, ODF-certified locations have achieved 90–100 per cent conversion, but preventing slippage back to earlier open defecation behaviours is a sustainability concern.

**Section 5B: Determinants of sustainability**

This sub-section presents a general list of factors found to be relevant by the evaluators. Sub-sector specificities are presented in Section 5C.

**Findings:**

1. Although the evaluation reports do not address sustainability determinants in a holistic way, they do reveal the following set of common themes that allow an implicit set of determinants to be identified:
   a. Technical: design of facilities and technical guidelines; planning of works and hydrogeological studies; procurement and management of construction contracts; and field supervision and quality control.
   b. Quality of implementation, including post-installation monitoring and follow-up support
   c. Policy comprehensiveness and coherence
   d. Institutional development and coordination: partnerships and sector coordination; capacities at all institutional levels; and engagement with both the demand and supply side
   e. Social: willingness of the community and individual households to maintain their efforts and their ability to do so
f. Financial: availability of funds to ensure continuous functioning of services; aid disbursement modalities
g. Environmental context: climate change and natural disaster risks beyond programme control
h. External factors: governance, corruption, conflicts and security, and economic crises beyond programme control

2. The two types of determinants most commonly found to be insufficient are the institutional factors and the quality of programme design and implementation.

3. Institutional challenges include lack of government leadership; human, financial and technical capacity shortfalls; insufficient government regulation, monitoring and incentive mechanisms; and staff turnover leading to weak institutional memory.

4. The major programme design and implementation challenges are:
   a. Insufficient geographical concentration of WASH interventions;
   b. Weak integration with complementary sectoral programming (e.g. health);
   c. Loose field supervision and quality control arrangements causing low quality infrastructure and ineffective behaviour change communication; and
   d. Lack of post-intervention monitoring.

5. Family and community contributions tend to appear as projected, as long as the facilities function. However, the more the financial model depends on budget contributions from governments and aid allocation from donors, the more sustainability varies as these are often unevenly received and insufficient.

6. Little consideration was given by the evaluators to external and environmental factors as threats to WASH sustainability.

Examples: In Burundi, the Democratic Republic of the Congo, Haiti and Mauritania, capacity gaps in regional directorates and local authorities have increased as new responsibilities were transferred to them due to the decentralization process in the WASH sector. Providing post-intervention follow up and support in addition to fulfilling their ongoing duties was a challenge.

A series of sustainability checks (post-intervention field surveys) conducted in Mozambique led to an improvement in the functionality of UNICEF-installed water points due to the realization of the need for strengthened training of community water and sanitation committees and the reinforcement of the supply chain for spare parts.

Analysis:

#16: The administrative level can have a surprisingly large effect on technical and financial capacity. Technical capacity tends to decrease steadily at each level below the central authorities. Upgrading and maintaining sub-national capacities can be extremely difficult when, as is common, there are prohibitions or controls on the local taxing authority. Matching resources with authority is a key sustainability concern.

#17: Threats that are beyond the immediate control of WASH stakeholders still require mitigation strategies. Risk identification and emergency/threat preparedness should be concerns of sustainability monitoring and evaluations. An over-concentration on the known situation will leave programmes under-prepared when risks emerge.

#18: Building in sustainability expectations from the start has useful long-term results. Accompanying development aid with sustainability-focused conditions such as sustainability compacts, sustainability checks or performance pacts has been observed to raise sustainability
issues on national government agendas. Rising budget allocations for maintenance and reinforcement have been associated with these agreements.

Section 5C: Sustainability by sub-sector

Findings:

Water supply

1. Non-functional water points typically arose because the planning phase did not follow guidance on maximum users per facility, leading to overuse and breakdown; service providers were assumed to be capable and therefore were not monitored closely enough to catch emergent problems; and water management committees did not carry out preventive maintenance tasks and did not seek or obtain rapid assistance for spare parts and repairs.

2. Cost recovery strategies always cover ongoing service operation and maintenance but rarely build up a capital fund for eventual replacement.

3. The lack of effective rural water supply management, governance and regulation models that support service performance in the long-term is a well-known sectoral risk factor. Little UNICEF engagement in these areas has been documented in evaluations, however.

CLTS

4. Evaluations consistently highlighted the problem of the poor quality of self-built latrines and of the associated effort and/or cost required from households to rebuild them and sustain ODF status. Although poor communities and households in difficult environments were especially vulnerable, a common unwillingness to upgrade the latrines was observed across income levels.

5. Sustaining behaviour changes requires follow-up visits and other incentives to reinforce community attitudes and support latrine replacement/upgrading. Slippage rates back toward open defecation behaviour were attributed in part to under-investment in behavioural reinforcement.

WASH in schools

6. One in four UNICEF WASH-in-schools programmes has been found to focus on either the hardware (construction) or the software component (capacity building and behaviour change). Both components should have gone hand in hand to support more lasting results.

7. The rapid turnover of teachers and students within beneficiary schools affects the sustainability of WASH-in-schools programmes. UNICEF’s tendency to implement WASH in schools through one-off projects is inconsistent with the need to promote the institutional structures that support school WASH in an enduring manner.

Examples: Evaluations from South Sudan and Timor-Leste documented good quality construction that emphasized full-time field supervision, quality control arrangements and intensive capacity building targeting all stakeholders. In contrast, 30–50 per cent of sites in Malawi did not receive supervision during siting, drilling, yield test, civil works and installation procedures. Understandably, community members were often frustrated with the very low-yield boreholes.
Frequent post-implementation visits and technical assistance in the Democratic Republic of the Congo are associated with sustaining good WASH conditions in supported villages.

Ten evaluations and sustainability checks of CLTS programmes were carried out 1–5 years after ODF certification. Reversion to open defecation does occur, but tends to occur in less than 25 per cent of cases. Slippage rates ranged from 0 per cent in Mali to 8 per cent in Timor-Leste to 18 per cent in Ethiopia to 22 per cent in Mozambique.

Analysis:

#19: Social solidarity mechanisms are not a real sustainability threat. When communities exempt their poorest members from WASH service fees (monthly tariffs or per-usage payments), they increase usage while reducing the income for operation and maintenance. The sustainability threat this poses, however, is very small compared with the commonly noted absence of a capital replenishment fund and the low profitability of parts that limit private sector partner incentives to carry spares. Resolving these issues is the far greater sustainability concern.

#20: There is little evidence of the hoped-for ‘sanitation ladder’. The expectation/hope of many in the sector that households will build better quality latrines to replace their initial low-cost latrine occurs very rarely. Benefits that accrue from better facilities will need to be targeted through renewed mobilization given that it is unrealistic to expect spontaneous improvements.
SECTION 6: CONCLUSIONS

When the findings are taken together, it is possible to identify broad conclusions about WASH and equity, scalability and sustainability. This section describes six conclusions that cut across the themes. Readers are reminded that the full report contains many more detailed conclusions about each specific theme and that the conclusions are based only on the evaluations, and other evidence known to the sector at large may challenge certain of them.

1. **Sanitation and hygiene is the sub-sector that best reaches equity, scalability and sustainability objectives.** The very low-cost, low technology and community-enabled CLTS strategy to achieve ODF environments reaches these objectives more completely than do the rural water and WASH-in-schools sub-sectors. In particular, these sub-sectors are impeded by significantly higher costs and skills requirements. Whether these conclusions would hold true if UNICEF were to engage more in urban environments remains to be seen.

2. **The conceptual underpinnings are weak in several important instances.** The evaluations showed no consistent sense of how the WASH sector expects to realize its goals in equity (populations beyond the poor and women), scalability (models and determinants) and sustainability (particularly determinants). UNICEF’s ‘learning-by-doing’ approach, however, generated implicit models and determinants that are available for review and refinement. This is needed for future programmatic and evaluative efforts.

3. **Trade-offs among the objectives are unavoidable.** Although UNICEF has committed to reaching equity, going to scale and sustainability objectives, it is consistently the case that progress in one dimension requires delayed or remedial efforts in another. Cost-efficient solutions useful for going to scale often lead to remote populations being bypassed. Reducing costs to users below capital replacement needs has equity benefits but damages sustainability. Devoting institutional capacity to sustainability efforts removes technical cadres that can be used for scaling up. Planners believing there are no opportunity costs among these objectives are likely to be mistaken.

4. **Managing the design phase is critical.** A large percentage of problems originated in the design phase where they could have been but were not foreseen and planned for. This included failures to understand the beneficiary population; ignoring the external context; lack of solid theories of change; under-investing in monitoring; failing to consider cost factors; and failing to engage in follow-up behavioural reinforcement. More positively, almost all of the actions needed to improve performance can be planned for from the start or can be responded to through good review processes.

5. **WASH interventions are achieving some but not all of the desired social goals.** Planners have accurately forecast that WASH interventions will inspire community/household pride and cohesion leading to programme energy and behaviour change. In three other areas, their plans, desires or communication messages have not been realized: a) that opening WASH management participation will empower women and other excluded groups to adjust other ‘unequal’ relations in the community and the home; b) that increasing privacy and the attractiveness of the school environment will lead to greater attendance and school performance by girls and the disabled; and c) that households acquiring their first basic latrine will improve on it with better performing replacements that move them up the social and sanitation ladders. WASH planners appear to be over-estimating the power of WASH
services within communities and under-estimating constraining social beliefs, restrictions and rules.

6. *Significant knowledge gaps remain.* This synthesis has not been able to provide conclusive analysis for issues that were only examined in very few evaluations. These can become the core of a follow-up agenda. Some of the issues can be investigated by including them in terms of reference for WASH sector evaluations. Others, such as what motivates families to move up the sanitation ladder, require a more focused research approach.
SECTION 7: RECOMMENDATIONS

It is understood that this evaluation synthesis represents an incomplete reflection of the knowledge base of WASH programme leaders. Consequently, the recommendations are limited to those that make a decisive case for action. All are directed to UNICEF, which has the ability to take action to achieve them. Other partners will need to be involved as well, however, as several recommendations require coordinated action among stakeholders.

In its management response to this review, the UNICEF WASH leadership will indicate its level of agreement with the recommendations and the actions it proposes to take in response. Certain actions may already be underway and others may be initiated for the first time. The management response can offer observations about how far UNICEF feels it can take action under its own authority, and where it will need to seek (but not guarantee) the acceptance and action of other partners.

1. Develop the evidence base

UNICEF needs to further develop the evidence base on the performance of various WASH interventions, focusing on the three themes examined in this report (sustainability, equity and scalability). Topics deserving additional investigation include: barriers to scaling up approaches that work at the programme level such as decentralized government capacity and financing; spontaneous diffusion; the organized replication model; recent community-based, low-cost approaches such as manual drilling and water safety plans; the Three Star Approach to WASH in schools; willingness to pay and optimal pricing/tariff setting; effective handwashing promotion approaches; long-term sustainability of WASH behaviours and services; approaches to reducing slippage in coverage, with emphasis on both structural and behavioural issues; related to this, cognizance of the social model and assumptions inherent in approaches to empower certain groups of interest such as women or disadvantaged people; and risk assessment and mitigation measures for contextual factors that are often considered to be beyond the control of programmes.

2. Better understand theories of change

UNICEF needs to examine and clarify the theories of change that prevail in water, in sanitation and in hygiene, covering household, community and institutional WASH. Future evaluations and research studies should assess the role of the enabling environment, which fundamentally determines the effectiveness of WASH programmes in terms of sustained population coverage with quality services. Based on current understanding, it is recommended to develop institutional/programmatic guidance to direct WASH staff programming for sustainable, equitable, scalable outcomes; and further develop guidance based on future research. This guidance should instruct WASH programmes on how to maximize equity, efficiency, scalability and sustainability, and how to deal with trade-offs among these.

3. Improve programme design and results frameworks

UNICEF needs to ensure that the design phase of WASH programmes clearly identifies the target groups and approaches to reaching them, including anticipating social, financial and other barriers that arise. Scalable approaches to identifying the most vulnerable and needy should be developed and implemented, recognizing that these population groups extend beyond gender and income group identifiers, especially in water supply. Based on prior research and evaluation
on theories of change, programmes should be designed to be scalable and sustainable, including by identifying the specific bottlenecks faced and approaches to removing them. The role and comparative advantage of UNICEF should be clarified and coordination/partnership with government and other partners should be sought from the start. Indicators to reflect outcomes and the enabling environment should be identified and monitored over the lifetime of WASH programmes for adoption by research and evaluations as well as routine programme monitoring.
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