

EQUITY, SUSTAINABILITY AND SCALABILITY IN UNICEF WASH IN SCHOOLS PROGRAMMING:

EVIDENCE FROM EVALUATIONS 2007–2015

Equity, sustainability and scalability in UNICEF WASH in schools programming: Evidence from evaluations 2007–2015

© United Nations Children’s Fund, New York, 2017
United Nations Children’s Fund
Three United Nations Plaza
New York, New York 10017

October 2017

Purpose

This document summarizes the evidence base used in the full report and presents the findings and conclusions related to equity, scalability and sustainability in United Nations Children’s Fund (UNICEF) water, sanitation and hygiene (WASH) in schools (WinS) programming.

The purpose of publishing evaluation review and synthesis reports produced by the UNICEF Evaluation Office is to fulfil a corporate commitment to transparency, and to assure those supporting the work of UNICEF that the organization rigorously examines its strategies, results and overall effectiveness. The reports widely disseminate findings and lessons learned, inform management decisions and stimulate a free exchange of ideas among the wider internal and external audience.

Author and acknowledgments

The evaluation review was conducted and the full report was written by Jérémie Toubkiss, Evaluation Specialist, under the supervision of Samuel Bickel, Senior Evaluation Adviser, at UNICEF Headquarters in New York. It benefitted from critical contributions from several Programme Division-WASH and Evaluation Office staff and consultants: Michael Emerson Gnilo, Raysa Casas, Sue Cavill, Allison Goforth, Prashant Menon, Laura Olsen, Laurence Reichel and Tina Tordjman-Nebe. This summary focusing on WinS evaluation findings was drafted by Jérémie Toubkiss and reviewed by Irene Amongin and Brooke Yamakoshi, WASH Specialists, David Delienne, WASH consultant, and Jane Mwangi, Evaluation Specialist, at UNICEF Headquarters.

Disclaimer

The content of the report does not necessarily reflect the official policies or views of UNICEF. The designations in this publication do not imply an opinion on the legal status of any country or territory, or of its authorities, or the delimitation of frontiers.

The copyright for this report is held by the United Nations Children’s Fund. Written permission is required to reprint/reproduce/photocopy or in any other way to cite or quote from this report. For non-commercial uses, the permission will be granted free of charge. For further information on the report or to initiate a permission request, please write to the Evaluation Office at: evalhelp@unicef.org.

CONTENTS

- CONTENTS 3
- OBJECTIVES AND METHODOLOGY 4
- FINDINGS: WASH IN SCHOOLS AND EQUITY 6
 - Definition, framework of analysis and evidence base..... 6
 - Situation analysis, theory of change and geographical targeting..... 6
 - Design of school WASH facilities..... 7
 - Maintenance and management arrangements for school WASH facilities 8
 - Menstrual hygiene management..... 8
 - Impacts on gender and inequities 8
 - Summary of performance 9
- FINDINGS: WASH IN SCHOOLS AND SCALABILITY.....10
 - Definition, analytical framework and evidence base.....10
 - Achieved scale and pathways to upscaling.....10
 - Financial factors11
 - Advocacy and mainstreaming efforts.....12
 - Institutional arrangements and capacities.....12
 - Role of teachers and schoolchildren13
 - Summary of performance13
- FINDINGS: WASH IN SCHOOLS AND SUSTAINABILITY14
 - Definition, analytical framework and evidence base.....14
 - Functionality and use of school WASH facilities14
 - Technical factors15
 - Social factors.....16
 - Financial factors17
 - Institutional factors.....18
 - Quality of programme design and implementation18
 - Environmental factors.....19
 - Summary of performance19
- CONCLUSIONS.....20
- RECOMMENDATIONS.....22
- ANNEX: EVIDENCE BASE25

OBJECTIVES AND METHODOLOGY

In September 2016, the UNICEF Evaluation Office presented to the UNICEF Executive Board an evaluation review and synthesis report entitled *Equity, scalability and sustainability in UNICEF WASH programming: Evidence from UNICEF evaluations 2007–2015*. The review questions were: What can independent evaluations tell us about UNICEF’s performance in terms of equity, scalability and sustainability in its water, sanitation and hygiene (WASH) programmes? What may have affected performance? What are the lessons learned?

The purpose was to provide a critical review of the previous UNICEF Global WASH Strategy (2006–2015) in which equity, scalability and sustainability were important corporate commitments. It was also to contribute to organizational learning and inform the development of the current WASH Strategy (2016–2030), which will guide the action of UNICEF and its partners toward the Sustainable Development Goals, with universal access, equity and sustainability as the guiding principles. In so doing, the evaluation review is expected to contribute to improving the quality of WASH programming at the country level. More generally, it feeds into some of the current, most vivid discussions related to aid, both internally, within UNICEF, and in the broader WASH sector, by bringing new evidence-based insights.

This report is a sub-product of the overall WASH evaluation review and synthesis. It presents the findings, conclusions and recommendations related to equity, scalability and sustainability in UNICEF WASH in schools (WinS) programming. WinS was one of the four main programmatic areas in the 2006–2015 strategy, together with water supply, sanitation and hygiene promotion, and WASH in emergencies. The strategy presented WinS as a right and highlighted the health and educational benefits for children, especially girls. The strategy states: “Providing children with safe, clean and reliable school WASH facilities helps to make the learning environment pleasant and healthy. Providing children with high quality hygiene education helps to give them the basis for a healthy and productive life, creates future demand for safe water and sanitation facilities and, where integrated with a community programme, can help to turn children into change agents for the whole community”.¹ UNICEF’s support for the WinS sector was guided by the overarching target of “ensuring that all schools have adequate child-friendly water and sanitation facilities and hygiene education programmes”. Over the strategy period, UNICEF’s support to WinS programmes increased from 40 to 80 countries around the world.²

This report is based on 37 evaluations of UNICEF-supported WinS programmes completed between January 2007 and July 2015. Evaluations of unsatisfactory quality were excluded. Five sustainability checks were added to the evidence base. They are sample-based field surveys conducted in several countries and focusing on sustainability issues.³ The 42 reviewed reports cover 30 countries and most major WinS programmes supported by UNICEF (*see Annex for a list*). The strength of the evidence base is considered good overall.

The analysis was done in a way that allowed reviewers to make comparisons, detect trends and patterns emerging from the evidence base, identify singularities, and find informative cases related to each thematic focus for each type of WASH intervention. This process reduced the risk of using anecdotal, inconsistent or potentially weak evaluation evidence to draw general conclusions.

A green/yellow/red colour coding system is used at the end of each chapter to convey an evaluative judgment in a reader-friendly way. Areas of overall strength or weaknesses are in

green and red, respectively, while the yellow colour indicates a mixed picture. Black diagonal shading indicates limited or insufficient evidence.

The main limitations of this evaluation review and synthesis are the following:

- It was not possible to access primary data and programme stakeholders to verify the accuracy of the evaluators' analysis and judgment.
- A systematic and standard approach to equity, scalability and sustainability analysis was lacking in the reports reviewed, which at times made the breadth of evidence and the quantification of findings challenging.
- Only a limited number of evaluations have been carried out in countries where UNICEF mainly engaged in WinS through upstream work and system strengthening. Such evaluations would have complemented the evidence base and possibly shed a different light on some specific aspects of equity, scalability and sustainability of WinS.
- The number of reports is often insufficient for detecting variations that may arise across programme size, maturity or location, and identifying improvements and other trends at the country and global levels over the reviewed period.

FINDINGS: WASH IN SCHOOLS AND EQUITY

Definition, framework of analysis and evidence base

In the context of this evaluation review, equity means that the resources, goods, services and opportunities produced by the WASH or WinS programme shall primarily benefit the most 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.⁴ This definition implies that an equity lens is used at each stage of the WinS programme cycle: situation analysis and geographical targeting; programme design and implementation; and monitoring, evaluation and evidence of success. This is the analytical framework used in this review.

The population groups of greatest interest are the following: the poor and most deprived; the remote and hard to reach; populations facing risks related to climate change; religious and ethnic minorities; slum dwellers; pastoralists; women and girls; elderly and disabled people; and people affected by HIV.

Among all reports reviewed, 28 reports covering 23 countries address equity issues in UNICEF WinS programming. Equity analysis is more systematically included in recent reports, in a dedicated chapter. However, the reports do not analyse the situation of all vulnerable population groups, and the analyses rarely cover all successive stages of the programme cycle.

Situation analysis, theory of change and geographical targeting

Over the period considered in this review, UNICEF WASH or WinS evaluations did not often critically examine situation analyses, theories of change and geographical targeting strategies, and whether these adopted an equity lens. Therefore, the extent to which the specific needs of and obstacles faced by various population groups have been investigated and considered in UNICEF WinS programme design is unclear. When evaluations did look at these aspects, however, they found a mixed picture.

For example, WASH inequalities among schools are rarely emphasised in programme theories of change and logical frameworks. The specific needs of girls are mentioned in most programme documents and evaluations, however, because sanitation- and hygiene-related tasks are traditionally the duty of girls in many societies, and because girls face many safety, dignity and health challenges related to the degree of availability, separation or privacy of school latrines. This also reflects UNICEF's corporate commitment to supporting girls' education. The needs of children and teachers living with disabilities are rarely discussed.

Sound equity-focused criteria for selecting beneficiary schools were found in approximately half of the evaluations that explored this aspect.⁵ This mixed picture related to geographical targeting is explained by the fact that other parameters have guided the decision making. Budgetary constraints are one of these. Building up-to-standard water points and enough latrines for all schoolchildren and teachers, and ensuring quality, security and inclusiveness, can be costly. In some cases, UNICEF has chosen to balance intervention schools that were to some extent already WASH-equipped with others requiring more investment.⁶ In other programmes, easy accessibility has been one of the selection criteria, leaving more remote

locations at a disadvantage. Other criteria included coordination with other UNICEF WASH, health or humanitarian interventions, complementarity with other donors/projects, and continuity with previous intervention areas. Finally, it may be difficult to target using an equity lens where the decision ultimately lies with the government and that government's distinct policy or political agenda.

Design of school WASH facilities

One third of the evaluations found that WASH infrastructure was adequately adapted to meet the needs of children with disabilities; one third found that WASH infrastructure was correctly designed but construction departed from original plans; and one third found that facilities were not easily accessible or inclusive. The following issues were commonly observed: narrow doors and cubicles; step at the end of the ramp or leading to the handwashing station; and the latrine's immediate surroundings were not accessible with a wheelchair. Inclusive design of water points was not discussed in the reports reviewed.⁷

The evaluation findings suggest that it is not easy to address all types of disability in latrine design. The findings also suggest that inclusive WASH facilities alone do not solve the problem of access of children with disabilities to school, given that often the classrooms, school compound and playgrounds are not disability-friendly. Inclusive school infrastructure requires strong coordination between the WASH and education sectors. The findings also revealed that in some countries, while WinS programmes have installed inclusive latrines, children with disabilities are not enrolled in the intervention schools. These findings suggest that inclusive WASH facilities may not be sufficient for attracting children with disabilities, who may go to more convenient or specifically adapted schools where they exist, or simply not attend school at all for reasons unrelated to WASH.

One third of the reports highlighted a lack of girl friendliness in latrine designs.⁸ The remaining two thirds found that at the time of design, latrines were sex-separated with specific siting standards for girls, minimum distance between boys' and girls' latrines, elevated walls to ensure privacy, and features for menstruating girls. Field visit observations found that these plans were not appropriately or systematically followed at implementation, however.⁹ This may be caused by a lack of gender awareness by builders, school management committees and teachers, a lack of consultation with users by builders, or a lack of space in school yards. Even when latrines were geographically separated, utilization rules set by UNICEF and its partners or by the schools to ensure privacy, especially for girls, were inconsistently enforced by teachers or overlooked by younger children.

During the review period, UNICEF and the World Health Organization recommended a ratio of girls and boys per latrine. The ratio is beneficial to girls because girls tend to have fewer latrines reserved for them given that more boys go to school than girls historically and education ministries have not built new latrines for girls to keep pace with the progressive increase in girls' enrolment. The evaluations showed that the ratio had not been applied in all UNICEF-supported school WASH programmes, however, even when a standard ratio was set in national policies or guidelines. The Ethiopia and Mali evaluations suggest that the programme budget and space available in the schoolyard were insufficient and therefore did not facilitate the systematic application of the recommended ratio.¹⁰ Furthermore, a higher number of latrines in populated schools meant additional efforts and resources for cleaning, and not all of the latrines ended up being used. In those schools, evaluators commonly observed a few latrine cubicles locked for future use. Another issue frequently raised in evaluations was the lack of latrines specifically planned for teachers, leading to teachers reserving one or two newly built latrines for

themselves, significantly reducing the student-per-latrine ratio initially intended by the WinS programme, and consequently the number of latrines available to girls.

Maintenance and management arrangements for school WASH facilities

A few evaluations highlighted that the WinS programme clearly communicated to schools that latrine cleaning should not be a task left to girls only.

The evaluations confirmed that most UNICEF-funded WinS interventions successfully encouraged the participation of girls in health/hygiene clubs. As members of these clubs, girls had the opportunity to be involved in WASH-related decisions. Whether this resulted in girls speaking up, actually influencing decisions, and ultimately improving the management of WASH facilities was not documented. Some evaluations raised the question of whether to set a boy/girl ratio in the membership of hygiene clubs – which has been done in several UNICEF programmes – and whether member selection should (also/rather) be based on motivation, dynamism and charisma.

Some evaluations observed that women in the surrounding community were specifically targeted and trained as members of pupils' mothers associations or food sellers. In Mali, women benefitted from the introduction of community saving groups (with exclusive female membership) as part of the school WASH programme.¹¹ One purpose of these groups is to help the community provide the school with the necessary WASH supplies in a sustainable manner, after initial external donation. The evaluation report provides concrete examples showing that women were effectively empowered and, as a result, supported several WASH and non-WASH-related initiatives.

Menstrual hygiene management

Many large school WASH programmes have integrated training on menstrual hygiene management for teenage girls and teachers, as well as specific features in the hardware package (infrastructure and supplies) delivered to beneficiary schools.¹² However, given that the evaluations did not consistently examine the extent to which menstrual hygiene management was integrated into WinS programmes, it cannot be concluded that this aspect has been mainstreamed into all UNICEF-supported programmes. This is partly explained by the fact that this issue was still relatively new to the UNICEF WinS agenda during the review period. Where this dimension was included in the intervention package, it was not always based on a comprehensive initial assessment of the actual needs of teenage girls. Some evaluations noted a lack of access to water and a means of disposing pads or similar products in girls' latrines.¹³

Impacts on gender and inequities

Evaluation evidence shows that girls benefit the most from school water points and separate latrines. When no water point exists at school, girls are usually responsible for bringing water from outside, which sometimes requires them to walk long distances. Moreover, girls tend to be discouraged from using the latrines when they are not gender-segregated, and to miss class during menstruation when school latrines are not available or do not ensure privacy. This is supported by consistent, qualitative reports from programme implementers, parents, teachers and children, based on perceptions.

The evaluations generally stated that improvements in WASH access and behaviours in schools ultimately improves girls' enrolment, attendance, participation and cognition/learning.

Nevertheless, this review finds that these claims are not confirmed by the robust, quantitative evaluation evidence available. One robust impact evaluation conducted in Mali between 2011 and 2014 and included in this review identified no significant, attributable impact on children’s – and especially girls’ – absenteeism (measurement of other educational parameters was inconclusive).¹⁴ This report includes a literature review of randomized and matched control trials that also concluded that evidence of impacts is lacking,¹⁵ and that “WASH alone might not be sufficient to influence children’s education, in particular to decrease absenteeism that is influenced by many other factors”.¹⁶ UNICEF has not yet evaluated the health and educational impacts of menstrual hygiene management.

Also missing is evaluation evidence on the impact of girls’ participation in hygiene clubs on their own empowerment.

Pupils from wealthy and poor families benefitted equally from school WASH interventions. Enrolment and attendance of children from poorer families is lower, however, indicating that any WASH improvement at school may disproportionality benefit relatively wealthier families. There is no evidence to suggest that school WASH interventions change this reality: evaluations have not attempted to assess the benefits of school WASH interventions on children from poor households specifically in terms of enrolment, absenteeism, health, learning or success. Also missing is evidence of the impacts on children from other disadvantaged and vulnerable groups such as children with disabilities, religious and ethnic minorities, pastoralists and children/families affected by HIV.

Overall, WinS monitoring and evaluation systems were not equity-lensed enough to appropriately measure the results of UNICEF-supported interventions on the reduction of inequities within various population groups of interest.

Summary of performance

Equity by stage in the programme cycle (colour coding):

Situation analysis, theory of change and geographical targeting	Programme design	Programme implementation	Monitoring and evaluation	Results in actually reducing inequities
---	------------------	--------------------------	---------------------------	---

Equity by population group of interest:

The poor and most deprived	Women and girls	Disabled people	The remote and hard to reach	Other vulnerable or marginalized groups
----------------------------	-----------------	-----------------	------------------------------	---

FINDINGS: WASH IN SCHOOLS AND SCALABILITY

Definition, analytical framework and evidence base

For the purposes of this evaluation review, scalability is defined as the ability and likelihood of a given intervention to augment its in-country scope, size or reach over time. This process of scaling up increases coverage and brings the country closer to internationally agreed development goals. This can occur through three pathways: an intentional replication strategy developed by UNICEF, its implementing partners, the government or other development agencies; an institutionalized uptake (i.e. mainstreaming in policies and administrative procedures); or a spontaneous diffusion in the field.¹⁷ Several factors can influence the scalability of a WinS or WASH intervention, either positively or negatively.

The findings below describe the level of scale achieved by UNICEF-supported WinS programmes and the main enabling and constraining factors as identified in the reviewed evaluations. They are based on 15 reports from 12 countries. It is to be noted that scalability issues have not been evaluated in a systematic way in any of the reports reviewed. Evaluations too rarely discuss the scale of the WinS programmes or emphasize cases where they have not been taken to scale (or not intended/designed to be taken to scale) – as if scale and scalability were not an important objective of a WASH/WinS programme and a key concern of evaluations. No definition, standards or benchmarks are established to judge whether a programme has reached a significant scale. Most evaluations also fail to analyse the underlying scalability factors. For this evaluation synthesis, scattered findings were gathered and presented in a structured fashion that does not reflect the way scalability has been addressed in individual reports.

Achieved scale and pathways to upscaling

The evaluation reports indicate that the in-country scale of WinS programmes has been more limited than for rural water supply and rural sanitation programmes (particularly the community-led total sanitation approach).

Of the 30 WinS country programmes evaluated, only two provided a full WASH package (with a hardware and a software component) to a relatively large number of schools across country programme cycles. These were the Democratic Republic of the Congo Healthy Schools and Villages programme, which began in 2008, and the Mali WinS programme, which began in 2011. The programmes covered more than 1,000 schools by the end of 2015. Both programmes progressively evolved to become national approaches to WinS programming rather than projects limited in scope and time. They follow a standardized implementation process supported by accompanying guidelines and training materials that are endorsed by the government and applied by the multiple implementing partners involved in the programme and partners not directly involved in the programme. There is no significant difference by donor. They also used a unified programme monitoring system, and periodically reviewed/evaluated and adjusted their programmatic approach.

The other, past or current, large WinS programmes in Bangladesh, India, the Lao People's Democratic Republic, Nepal, the Philippines and Sierra Leone either a) focus mainly on the software component (capacity building and hygiene education) with limited or no construction of

WASH facilities, even in schools where they were needed; b) are limited in time; or c) have not been evaluated. WinS programmes in the Plurinational State of Bolivia, Burundi, Egypt, Haiti, Indonesia, Kenya, Nigeria, Rwanda and the Sudan were included in WASH evaluations but have not yet been taken to scale. These programmes typically cover a few dozens to a few hundred schools.

Evaluations have emphasized the critical role that UNICEF has played in the advocacy for and mainstreaming of WinS policies and programming in countries (institutionalized uptake).

Regarding spontaneous diffusion, it has been uncommon due to several obstacles identified across the evaluations, including: the high capital cost of WASH facilities, which makes their construction highly dependent on external funding; lack of intention or effective programmatic approaches to reducing these costs while maintaining quality and sustainability; and sub-optimal institutional arrangements and low absorption capacity of investment. Key enablers include: the availability of continuous funding sources and advocacy and mainstreaming efforts accompanied by implementation guidelines and coordination/knowledge exchange platforms.

Financial factors

High investment costs for WinS interventions was mentioned in evaluations as a hindrance to scalability, particularly for spontaneous uptake/diffusion in the field and replication by national and sub-national authorities. Schools without a water point need one for drinking, handwashing and cleaning purposes. The unit cost of a borehole is typically between US\$5,000 and 20,000, depending on hydro-geological and market conditions. When a piped system already exists in the village, standpipes or taps can be installed in the school compound at a lower cost. Protected springs can only be used in favourable contexts (e.g. in some areas in the Democratic Republic of the Congo, Ethiopia, etc.). Reference was also made to the high costs of latrine/toilet construction.

Reducing the cost of the intervention by adjusting the construction modalities while maintaining quality and sustainability has only been attempted in a few countries. Several evaluation reports discuss the participation/contribution of beneficiary teachers and school management committees, and the self-construction approach for latrines and water points, with the additional benefit of increasing ownership.¹⁸ Concerns were raised with the management of multiple stakeholders, however, including the contractual complexity of such an arrangement, as well as construction quality and timeliness. Targeting schools that already have WASH facilities or only carrying out capacity building and awareness raising (software) activities in countries where schools do not yet have WASH facilities poses an obvious equity problem. In a few countries, handwashing devices named 'tippy taps' that are made locally and by hand have been promoted or recommended as a low-cost, easily replicable technology.¹⁹ It should be noted that during the period under review, no evaluation had been commissioned on the 'Three Star Approach' for WinS as UNICEF only started to promote this lower cost approach at the end of the period under review.²⁰

In the Democratic Republic of the Congo and Mali, WinS scale up was possible thanks to strong financial commitment from multiple donors. In both countries, UNICEF has continued to raise funds to keep the programmes going. In the Democratic Republic of the Congo, UNICEF created a donor pool fund. Many of the countries with relatively larger WinS programmes funded through UNICEF are countries that have experienced an emergency situation. These emergency situations have generated increased funding for UNICEF.²¹

Advocacy and mainstreaming efforts

The large majority of evaluations pointed to UNICEF's advocacy efforts and its critical role in the development of WinS policies, standards and guidelines that aimed to increase WinS coverage and scale up implementation approaches and lessons learned. The following specific examples of success were documented: increased budgeting for WinS at the provincial level and the development of a roadmap for financing and scaling up WinS in Indonesia; the validation and roll out of a national strategy and standards in the Democratic Republic of the Congo; the development of technical guidelines for WASH facilities (e.g. in Haiti, Kenya, Nigeria); the incorporation or reinforcement of WinS in the curriculum in Bosnia and Herzegovina, Indonesia and the Lao People's Democratic Republic (the 'Blue Box' programme); the integration of WASH and menstrual hygiene management into the national teacher training curriculum in Mali; the inclusion of additional WASH indicators in the administrative education monitoring and information systems in Indonesia; the inclusion of WASH in the school routine inspection visits in the Democratic Republic of the Congo; and the creation of a system of certification or reward similar to the open defecation free certification process in the Democratic Republic of the Congo and Mali (in the Democratic Republic of the Congo, schools must comply with pre-defined standards to receive the healthy schools certification); and the organization of a competition between beneficiary schools, with schools receiving a prize for the best final score, in Ghana, Indonesia and Mali (the competition was project-based, however, and not institutionalised).²²

By embedding WASH in national policies, budgets, administrative procedures and the routine work of the education system, these initiatives addressed systemic WinS issues and had the potential to benefit all schools in the country. In reality, the roll out of these initiatives outside of the UNICEF-supported areas was inconsistent or not documented, and, as always, highly dependent on the willingness of governments and other development partners.

In several countries, UNICEF facilitated the creation of coordination platforms with/between the government and its development partners, such as a programme steering committees and provincial WASH committees in the Democratic Republic of the Congo; the WinS Alliance in Haiti; the national, provincial and local WASH multi-stakeholder working groups in Indonesia; and the National Network of NGOs for WASH in Schools in Mali.²³ Such platforms have reportedly been instrumental in raising awareness, leveraging funds and disseminating guidelines to other, non-beneficiary schools, facilitating trainings and carrying out periodic advocacy campaigns targeting line ministries.

The evaluation findings point to the strength and comparative advantage of UNICEF as an actor in both development and emergency settings and as WASH cluster coordinator in emergency situations. This role has offered UNICEF the opportunity to bring together stakeholders that previously worked in development settings, improve coordination between them, share WinS experiences and tools developed as part of regular programming, and encourage their replication. Cited examples are WinS technical standards/guidelines and information, education and communication tools in the Democratic Republic of the Congo, Mali and Pakistan and the 'Participatory Health and Hygiene Education Field Guide' in Zimbabwe.²⁴

Institutional arrangements and capacities

Despite UNICEF's investment in policy advocacy and capacity building, evaluations continue to highlight government leadership and institutional arrangements as bottlenecks to WinS scale up. More specifically, they found that: WinS was a lower level priority for planners at national and local levels compared to the construction of classrooms and other basic infrastructures;

lines of responsibility between ministries of education, water, sanitation and health were not always clear; within the ministry of education, numerous departments are involved such as those in charge of primary and secondary education, infrastructure, school health and environment, teacher training, girls enrolment etc.; human capacities were lacking within each ministry and department; communication and coordination between the national and subnational levels were erratic; and turnover of decision makers and trained technical staff limited the long-term benefits of UNICEF’s advocacy and capacity building initiatives.

Decentralization reforms have not improved the situation at local levels as more responsibilities have been transferred to local authorities without being accompanied by the corresponding human, financial and technical resources. As a result, government institutions at central and subnational levels in most countries are not able to implement multiple activities, effectively manage large programmes, or reach dispersed and remote areas.²⁵

Role of teachers and schoolchildren

The role of teachers and schoolchildren in bringing about WASH improvements in their new schools after they leave the UNICEF-targeted school is mentioned in a high number of evaluations (spontaneous diffusion). Yet this phenomenon, which is either explicitly or implicitly intended by WinS programmes, was not well evidenced in the reviewed reports.

Summary of performance

By scalability/upscaling pathways:

Spontaneous diffusion	Encouraged or organized replication	Institutional uptake
-----------------------	-------------------------------------	----------------------

By scalability factors:

Effective and scalable approach	Unit costs and funding	Main-streaming	Government willingness and leadership	Institutional arrangements and coordination	Absorption capacity	Implementation guidelines and tools
---------------------------------	------------------------	----------------	---------------------------------------	---	---------------------	-------------------------------------

FINDINGS: WASH IN SCHOOLS AND SUSTAINABILITY

Definition, analytical framework and evidence base

For the purposes of this evaluation review, sustainability is the ability of intervention outputs, outcomes and impacts to continue after the withdrawal of all forms of assistance from the external development agency. Forty evaluations and sustainability checks conducted in 26 countries between 2007 and 2015 inform the sustainability of UNICEF-supported WinS programmes.

Depending on when the evaluation was carried out during the programme timeframe (at programme implementation or completion), this synthesis looked either for the documented presence of the conditions known to be associated with WinS sustainability (i.e. likelihood/prospects for sustainability) or for evidence of WinS activities and results having been maintained during a significant period of time after donor funding has ended (i.e. actual sustainability).²⁶ A commonly agreed definition of what a “significant period of time” means for a WASH/WinS intervention does not exist, but was set to one year or more for the purpose of this report. A longer period would have significantly reduced the amount of evaluation evidence and data available.

Functionality and use of school WASH facilities

Overall, at least one year after completion of the intervention, the rates of functionality and use of water points were higher than the rates of functionality and use of latrines, which in turn were higher than the rates of functionality and use of handwashing stations (with presence of water and soap).

The functionality rate of school water points typically ranged between 70 per cent and 100 per cent, compared with 50 to 100 per cent for latrines and 0 to 70 per cent for handwashing facilities. The utilization rate of functional water points was usually 100 per cent, compared with 50 to 80 per cent for functional latrines²⁷ and maximum 60 per cent for functioning handwashing facilities. It is worth noting that the presence of a functional handwashing facility with water and soap tends to be higher in schools than in households, but remains a critical problem overall.

Knowledge of good hygiene and sanitation practices, gained thanks to communication and educational activities, was more sustainable than actual practice. Typically, more than half of beneficiaries interviewed in evaluations had a good level of knowledge, though less than half of beneficiaries put their knowledge into practice.

These figures are often based on a limited sample size, sub-optimal data collection and triangulation methods, and inconsistent definitions (e.g. of what a ‘functional’ water point is). Furthermore, in most evaluations, baseline and end-line data, as well as data from comparison schools are missing, which makes it difficult to form a reliable picture of the evolution of the sustainability curve over time and the exact improvement induced by the WinS programme.

The impact evaluation conducted in Mali between 2011 and 2015 is the most comprehensive and rigorous UNICEF evaluation available for the review period. It included longitudinal data collection for up to 2.5 years after the completion of programme activities. It found relatively higher sustainability results. Ninety per cent of water points were still functional and all of the

water points were used two years or more after the intervention. One hundred per cent of schools still had improved and functional latrines, but 15 per cent still had pupils practicing open defecation (i.e. no report and no traces of open defecation in 85 per cent of them). Only 65 per cent effectively complied with the sex-separation requirement (based on observation of children's actual behaviour) and only 50 per cent complied with cleanliness criteria. Nearly 60 per cent of schools still had functioning handwashing stations with water and soap, and nearly 60 per cent of the pupils in these schools were using the stations upon leaving the latrine. Nearly 100 per cent of schools still had basic hygiene equipment (at least one kettle for anal cleansing, a trash bin, drinking cup and drinking containers), 85 per cent had soap and 70 per cent had detergent. As mentioned, these rates tend to be lower in other countries. In the case of Mali, it is interesting to note that the functionality of water points continued to improve and the practice of open defecation continued to decrease in schools as the amount of time since implementation passed. This phenomenon was not observed for other WASH facilities and behaviours.

The factors associated with WASH/WinS sustainability are usually classified under five categories: technical, social, financial, institutional and environmental.²⁸ They were often reinforced by the way the intervention was designed and implemented.

Technical factors

Technical factors are considered one of the most important determinants of sustainability in WASH. The assumption is that the higher the construction quality, the longer the infrastructure and their use will last. According to the evaluation reports, the quality of WASH construction in schools varies significantly depending on the country, the years/contractors, and the individual schools. It is not possible to conclude from the evaluations that some country programmes are generally doing better than others. Moreover, given that the context-appropriateness of the hardware component, the quality of construction, and the underlying causes have not been systematically and consistently assessed in the evaluations, it is also not possible to estimate whether there has been an improvement over time. Cases of failure and success have been documented in some countries, however, and their causes identified.

- **Planning:** In some schools, not enough facilities were planned to satisfy the needs of the entire school population, leading to overuse and broken hand pumps, taps and structures.²⁹
- **Preliminary studies and technology choice/design:** Dry boreholes, inadequate siting and improper ventilation of latrines were attributed to lacking or incomplete technical and environmental studies. In three of the five evaluations examining school rainwater harvesting systems, the systems did not provide sufficient water throughout the school year due to low rainfall or under-sizing. All five evaluations found the original design or technical specifications to be unsatisfactory.³⁰ In Mali, double pit latrines were not well understood and used by teachers and pupils, and training efforts were ruined by turnover of school stakeholders. This led to the replacement of this technology by simple pit latrines. Tippy taps are another example of a lower cost technology choice. They are not as solid but require fewer resources to maintain and can easily be replaced by the school and therefore might be more sustainable. They have been promoted by UNICEF and its partners in several countries or recommended by evaluators. The 2015 Timor-Leste evaluation, on the contrary, calls for “the use of low maintenance technologies, together with solid, durable designs, for water systems and WASH facilities; although

more expensive in terms of the initial investment, they are more cost effective in the long run and thus more sustainable”.

- Construction quality, training and supervision: This is the most commonly identified problem.³¹ The low capacity of the builders, insufficient training of contractors by UNICEF and partners, poor quality of materials and spare parts, and weak field supervision are listed as main causes. Based on evaluations, approximately half of WinS programmes assigned part or all of the works to the local school management committees (or parent-teacher associations), local builders and teachers; the other half of WinS programmes assigned works to private construction companies. The first model did not necessarily lead to higher ownership and sustainability, and pros and cons were identified for both models, depending on the local context and capacities.³² In any case, involving beneficiaries in construction monitoring is critical: several evaluations noted cases where newly built facilities were abandoned or not used because they were built during school holidays when school staff were absent, and therefore not supervised by and officially handed over to staff. UNICEF and partners provided initial construction training in a few countries only. Private contractors are assumed to have the required competences and experience because they have been selected based on these criteria and construction is their profession. For the same reason, continuous, independent and professional supervision has been found to be missing in many countries. In Mali, initial construction quality issues were successfully addressed by revising bidding documents (including contractual requirements and technical specifications on construction materials and equipment, and attention to details such as infrastructure dimensions, slopes, etc.); streamlining the procurement process (i.e. detailed eligibility and technical assessment criteria, use of past assessments of contractors’ performance and reference checks to disqualify/retain bidders, increased weight for the technical vs. financial scoring); adjusting payment modalities (augmented advance payment and bank guarantee); replacing government technical departments by engineering companies for daily field supervision; training government departments and construction companies on technical and organizational issues after contract signature; providing government departments and construction companies with siting³³ and quality checklists; and organizing monthly monitoring meetings.

Social factors

Social factors are mainly related to the level of engagement and ownership of local stakeholders. These factors influence stakeholders’ willingness and ability to take up the challenge and continue their efforts, and thus impact the functionality and appropriate use of WASH facilities over time.

- Level of priority: As stated in one evaluation and confirmed in others, “although teachers and school management committees usually recognize the need for and benefits of improved water supply, sanitation and hygiene at school, they tend to cite the lack of classrooms, fences and school canteens as more urgent priorities. Sanitation and hygiene, in particular, are lower priorities.”³⁴ School fencing is mentioned as a prerequisite for the success of school sanitation and hygiene interventions and therefore when a fence was not available or foreseen to be built, beneficiaries did not always prioritize WASH.
- Motivation and commitment: The engagement of teachers in WASH-related activities is an issue because they often perceive WASH as an additional burden on their already

busy schedules. Many of the tasks that teachers are expected to perform cannot be accomplished without sufficient budget allocations from the ministry of education or the local authority, which can lower motivation among teachers and reduce the sustainability of interventions. Even after awareness raising and capacity building (software) activities, the level of commitment at schools can remain low. Some programmes have established specific measures to increase buy-in, such as involving beneficiaries in construction activities/monitoring; identifying and mobilizing leaders in schools; self-supplying hygiene kits; organizing school competitions, etc. The programme in the Democratic Republic of the Congo developed an innovative approach that UNICEF adapted in Mali. The programme is publicly advertised and schools and villages that are interested in participating are invited to send an application. Schools are then selected based on eligibility and prioritization criteria. This approach makes the programme visible and raises community motivation and ownership.

- Awareness, behaviour change and maintenance: Dirty latrines and broken and stolen taps are widespread challenges identified in more than half of WinS evaluations and sustainability checks. Other recurrent challenges include: water and soap is present but not made available to pupils or not replaced when used up; latrines are locked or set-aside by teachers; and overflowing pit are not emptied. These issues reveal suboptimal awareness, ownership and behaviour change among children (and sometimes teachers), as well as a lack of regular maintenance/repair. Another related issue is the enforcement of latrine gender segregation. Adjustments on technology choices and designs (or indications on latrine doors), the establishment of school hygiene clubs, and the existing intensity of awareness raising, behaviour change and post-intervention follow-up did not effectively eliminate the problem.
- Community involvement: Although the role of children as agents of change in their communities is discussed in several reports, the influence of community members, organizations, dynamics and WASH conditions on the sustainability of school WASH is largely overlooked. Only three evaluations reported that women's self-help groups, young people's associations, scouts, guides and food sellers were considered both beneficiaries and agents of change with the potential for supporting sustainability in schools. This may indicate a weakness in the software component of WinS programmes.³⁵

Financial factors

The lack of a WASH operation and maintenance fund was identified in all evaluations as a major obstacle, for example, to repairing broken latrines, taps and hand pumps and purchasing soap and cleaning agents. Budgetary allocations from the ministry of education and local authorities are increasingly scarce since the transfer of educational competences to local authorities. In Indonesia, the Lao People's Democratic Republic and Pakistan, funds exist but schools do not access these funds in a timely manner or are not aware that the funds can be used for WASH infrastructure.³⁶ In Mali, UNICEF and partners helped beneficiary schools leverage two local sources of funding: 1) a fund is created by the school hygiene club and endowed by voluntary contributions from community members and fines levied from schoolchildren caught engaging in poor sanitation and hygiene behaviour; and 2) women's savings and loan groups are established in the community and benefits are partly used to provide the school with hygiene supplies.³⁷

Institutional factors

Institutional weaknesses within the school organization and the wider national education system affect sustainability, which is why UNICEF has invested heavily in institutional strengthening.

- Within schools: Responsibilities and systems for operating and maintaining WASH facilities are often not clearly defined in schools. To address the issue, WinS programmes systematically train teachers, strengthen school management committees and create school hygiene clubs. Between 0 and 50 per cent of these structures or parent-teacher associations were assessed as functional one to three years after the intervention.³⁸ Decision-making processes and accountability mechanisms were found vague or not applied, quality and frequency of training were questioned, and no routine supervision from the education ministry was in place. Members were theoretically elected by schoolchildren and responsible for organizing regular cleaning activities in the school, but often ended up appointed by teachers and executing cleaning tasks directly. In Rwanda and Timor-Leste, an employee was responsible for cleaning the latrines.³⁹ The 2014 Indonesia report suggested working with an existing system of class representatives rather than creating new clubs for WASH specifically.
- The wider national education system: The existence or lack of school WASH policy and guidelines, institutionalized WASH education for teachers⁴⁰ and children, and inclusion of WinS inspections and monitoring are major determinants. UNICEF has worked to strengthen the enabling environment for WinS in all evaluated countries. UNICEF's influence largely relies on its long-term cooperation with and trust from governments both at central and subnational levels. An area for further investment is the setup of administrative or financial incentives and sanction mechanisms for both teachers and school management committees.

Quality of programme design and implementation

Most of the underlying causes for limited sustainability discussed above could have been reduced through better programme design and implementation. Overall, evaluation findings point to weak theories of change for WinS programming.

- Comprehensiveness of the intervention package: Several countries have designed their programme without any hardware component and without targeting schools that already had WASH facilities.⁴¹ Evaluations showed that behaviour change and training activities without the availability of corresponding WASH facilities at schools cannot provoke a sustainable behaviour change. Similarly, limiting the hardware component to latrines and handwashing stations only – probably due to budget constraints – has the same (lack of sustainable) effect because it is extremely challenging to wash hands, clean classrooms, latrines and handwashing stations, and use sufficient drinking water when there is no source of water in the school yard.⁴² Children have to fetch water in the village from a source that is shared between schoolchildren and community members, increasing the ratio of users per water point and threatening its viability.⁴³
- Intensity and quality of the software component: Many programmes were found to carry out capacity building as a series of one-off training sessions for various audiences even though school teachers and schoolchildren change every year, and their cooperation with other stakeholders is key to success and sustainability. The training package and quality was also uneven, with only one evaluation praising the comprehensiveness of the topics and

soundness of the methods. Similarly, awareness raising activities typically covered a six-month to one-school-year period, and many evaluations point out that behaviour change does not occur in such a short timeframe. The 2014 Democratic Republic of the Congo report showed that “the length of the software component is statistically associated with the sustainability of the ‘healthy’ status” of the beneficiary school or community. This should be planned and budgeted for in the initial donor proposal if the programme outcomes are to be sustained. Evaluations have listed specific areas for improvement.⁴⁴

- **Linkages with the community:** This is identified as a weakness in approximately half of the evaluations. Efforts to link the school with the community take two main forms. The first is combining WinS with community-based sanitation promotion and water interventions in the same village. Although only a few examples have been documented,⁴⁵ concurrent WASH improvements in schools and surrounding communities are known to maximize impacts and sustainability.⁴⁶ The second is encouraging the school hygiene club and teachers to carry out sensitization activities in their communities. This was considerably more common. The extracurricular activities were usually appreciated by children, teachers and parents.⁴⁷ However, the drivers and obstacles that children face when it comes to effectively influencing their families were investigated in the reports reviewed. The 2012 Kenya evaluation found that “many children reported sharing the information with their families but fewer caregivers reported receiving the information from their child”. While children are often encouraged to interact with their families on WASH issues, it is unclear to what extent the opposite is true.⁴⁸ Whether or not school-based WASH programmes encourage the community to interact with the school and the extent to which this additional linkage between the settings supports sustainability has not been evaluated.

Environmental factors

Environmental factors can constrain sustainability in ways that are beyond the control of UNICEF and its partners. These can include physical constraints, climate change and falling water tables. These factors have not been sufficiently investigated in UNICEF WinS evaluations.

Summary of performance

Actual sustainability (functionality, utilization) by type of WASH output or outcome:

Water supply	Sanitation	Handwashing
--------------	------------	-------------

Performance by sustainability factors:

Technical	Social	Financial	Political and institutional	Quality of programme design and implementation	Contextual and environmental factors
-----------	--------	-----------	-----------------------------	--	--------------------------------------

CONCLUSIONS

This review and synthesis extracts evidence and lessons from UNICEF evaluations conducted in a large number of countries over a long period of time. Evaluations are only a part of the overall knowledge base on UNICEF's global WinS programming. This report should therefore be read in conjunction with other relevant sources of evidence. Moreover, the review does not include evaluations that have recently been finalized. The conclusions that are formulated here are directed at UNICEF, as well as the sector as a whole. Many of the challenges and weaknesses summarized above are not specific to WinS or WASH programming, or to UNICEF.

The review finds that key equity considerations have been mainstreamed into WinS programmes during the design and implementation stages, with a focus on girls and, to a lesser extent, disabled children, and with some countries performing better than others. However, this process has not been supported by detailed, equity-lensed situation analyses, theories of change and geographical targeting strategies. Moreover, the results achieved regarding the reduction of inequities between various population groups of interest remain uncertain except for girls due to a general lack of equity-lensed monitoring and evaluation. Qualitative evidence suggests particularly strong benefits for girls. Evidence of impact on education in general, and on girls' attendance in particular is lacking, however.

UNICEF took commendable action regarding policy advocacy, guideline development and strengthening the enabling environment for WinS. The translation of these efforts into concrete improvements and scale up in the field has been constrained primarily by limited government leadership and weak capacities at all levels. Scaling-up through an organized replication strategy and spontaneous diffusion in the field has not materialized in WinS programming, primarily due to the lack of purposively designed models including a well-defined WASH package and cost-effective approaches, and weak institutional arrangements and capacities. Among those evaluated, only two WinS programmes – those in the Democratic Republic of the Congo and Mali – have reached more than 1,000 schools and survived the expiration of the initial donor funding or of the UNICEF country programme cycle. This is striking given that these two countries are confronted with similar issues faced by other countries, such as leadership, institutional and capacity challenges, and unstable contexts. Useful lessons can be drawn from these cases in terms of institutional and partnership arrangements, standardization approaches, and monitoring, evaluation and learning systems and processes.

WASH infrastructure and its proper utilization remain difficult to sustain, with the additional issue in schools of the frequent turnover of teachers and students. Based on the available evidence, the most critical concern is handwashing, both in terms of the effectiveness of promotion strategies and the sustainability of achieved results. The limited data available suggest that other WASH improvements such as water and sanitation infrastructure and behaviours may sustain at reasonable levels for more than two years.

UNICEF and its partners did not demonstrate a systematic approach to identifying and tackling the factors affecting WinS sustainability. Based on the evaluation evidence, there has been a lack of formal and WinS-specific context, situation and causal analysis, as well as theory of change and intervention strategy, resulting in incomplete intervention packages, suboptimal quality of hardware, low intensity and quality of the software component, and weak linkages with the community. Key external factors, which are partly beyond UNICEF's influence, include: uneven levels of motivation among teachers; varying levels of observance/adherence to programme objectives among children; the absence of administrative or financial incentives and

sanction mechanisms for teachers and school management committees; and insufficient funds for WASH operation and maintenance.

The factors enabling and constraining the success of WinS programmes are in part under the control of UNICEF and its implementing partners. This calls for an appropriate integration of equity, scalability and sustainability considerations throughout the programme cycle – in the situation analysis, programme design, implementation, and monitoring-evaluation-learning. On the other hand, success also depends on the extent to which an appropriate response and uptake occur on the side of the national and subnational authorities, and within the intervention schools and communities.

Overall, on the UNICEF side, the evaluations did not reveal a consistent sense of and conceptual underpinnings for how the organization expects to realize its goals regarding equity, universal access and sustainability in its WinS programming under the previous global strategy and country programmes. The elements of the analytical framework and identification of critical factors developed or refined for this evaluation review were not included in the 2006 strategy and did not guide UNICEF's programming in the field. This analytical framework and UNICEF's 'learning by doing' approach in country level WinS programming have generated examples and implicit models that are available for review and refinement. This is needed for future programme and evaluation efforts.

The evidence base indicates an uneven quality of WinS programmes across countries, and does not suggest that cases of successful innovation and good practices have propagated enough in other countries. This points to a deficit in knowledge exchange and learning both within UNICEF and in the broader WinS sector.

Significant improvements were made in UNICEF WASH/WinS evaluations during the review period. A clear trend towards more equity-focused evaluations has been observed since 2010, with equity more systematically included in evaluations and increasingly included as a standalone evaluation criterion. Fourteen countries have conducted checks specifically focusing on sustainability issues, adding to the evaluative body of evidence on the quality of UNICEF WASH/WinS programming in the field. However, evaluations and sustainability checks do not use clear and commonly agreed definitions, data collection methods and benchmark, making the results patchy, difficult to aggregate at the global level and difficult to compare across years and countries.

RECOMMENDATIONS

The recommendations proposed below directly flow from the above findings and conclusions and consider the most recent developments in UNICEF WinS programming. As this report draws from country level evaluations to formulate global level findings, most recommendations target UNICEF Headquarters and WASH sections in UNICEF regional offices. However, given UNICEF's decentralized accountability structure and the relative autonomy of country offices in programme design, management and evaluation, the findings and recommendations should also be disseminated to country level WASH teams.

On WinS strategies and advocacy at the global level:

1. Develop a formal theory of change for WinS programming that is generic (not country-specific) but to which country programmes can refer and use for designing their own programmes and monitoring and evaluation frameworks. This theory of change should expose how UNICEF aims to realize its goals regarding equity, universal access and sustainability.
2. Maintain past efforts to raise more sustainable funding for WinS programming, prioritizing countries where this funding is most needed.
3. Revisit WinS advocacy messages to better align them with the current evidence base. Rather than placing significant emphasis on the impact of WinS on absenteeism and girls' education, highlight other key aspects, including: water and sanitation as a human right; the inclusion of WinS in the global development goals as part of both education and WASH targets; the impact of WinS on learning environments; the importance of combining schools and community WASH interventions to improve children's environments holistically, and thereby maximize impacts on child health, dignity and psychosocial well-being.
4. Advocate with the World Health Organization (WHO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) for a more realistic and evidence-based approach to addressing the ratio of girls and boys per school latrine. The ratio should be more closely tied to the school population, and complemented by a recommendation/provision for at least one latrine cubicle reserved for teachers.
5. Strengthen collaboration and synergies between UNICEF WASH, Education and Communication for Development sections to establish joint advocacy campaigns and develop joint implementation strategies for institutional strengthening and software programme components (*see also Recommendation 9*).
6. Institutionalize learning by:
 - A. Continuing to roll out and, if necessary, revise the content of the existing WinS e-course developed by UNICEF and Emory University to address the weaknesses highlighted in this evaluation review and ultimately improve the quality of programme design and implementation at the country level.
 - B. Expanding the use and content of existing knowledge exchange and management platforms such as the UNICEF WASH intranet, which is currently being revamped,

the WinS network and community of practice, the monthly UNICEF WASH bulletin, and the periodic webinars organized at UNICEF Headquarters. Use these to share evaluation evidence, good practices and implementation guidelines/tools. Particularly needed are examples of high-quality WinS construction standards/guidelines, training materials, implementation documents, quality assurance tools, robust evaluation evidence, and sector policies, strategies and advocacy documents. Priority should be given to documents from more mature programmes, such as in the Democratic Republic of the Congo and Mali, that have been refined over the years, as well as documents developed by innovative country programmes.

- C. In collaboration with the WinS network and other relevant development agencies and academic institutions, supporting the development of a centralized, thematic and annotated bibliography or online repository/database of above-mentioned WinS documents. It would consolidate state-of-the-art knowledge and the experience of multiple organizations in one, accessible location, stimulate expert debates, and bridge the knowledge gap between staff in different locations, as well as between the field and global levels. This resource should not be restricted to UNICEF ownership and audience, and its development and periodic update should be institutionalized, carried out collaboratively and sustainably funded.

For WinS programming in the field (country office level):

7. Conduct country-level WinS context and problem tree analyses more systematically, focusing on equity, scalability and sustainability bottlenecks, as well as handwashing behaviour change. Together with the generic theory of change mentioned above, use these analyses as a basis for developing formal, WinS-specific theories of change, geographical targeting strategies, and comprehensive, quality intervention approaches that encompass both field interventions (with an appropriate WASH package) and enabling environment strengthening. A few good examples of problem tree analysis and theory of change exist that can be disseminated to inspire other country offices.
8. Enhance coordination/synergies in regards to WinS programming among UNICEF WASH, Education and Communication for Development sections, as called for in both the previous and current UNICEF global WASH strategies. Joint efforts should be directed to the mainstreaming of WASH within the education sector, and the refinement of intervention strategies and approaches in the field. More specifically, potential areas of collaboration could be: inclusion of WASH in education policies, national teacher training curricula, school construction standards/guidelines, education information management systems, and school inspections; the establishment of administrative and financial incentives for teachers to engage in school WASH improvements; the development of a more holistic approach to inclusive and gender-friendly school infrastructure; and the development and testing of various capacity building and behaviour change approaches.
9. In line with the universality of the Sustainable Development Goals, systematize the integration of WinS interventions in the field in other community-level WASH interventions (and WASH interventions in health care facilities) to foster synergies between target institutions and host communities, and thereby maximize sustainability and impact. This was already a commitment made by UNICEF in the 2006 Global WASH Strategy.

On WinS evaluations: An agenda for knowledge generation, learning and evidence-based programming

Going forward, UNICEF will need to address the equity, scalability and sustainability challenge with a more evidence-based, multi-component strategy aimed at addressing all factors at play. The relative importance of each factor, the nature of the underlying causes, and the appropriate programmatic response varies from one context to another. Better designed and higher quality programme evaluations and formative research are needed to elucidate these factors and develop or refine intervention models for WinS.

10. Systematically include equity and scalability as standalone criteria in UNICEF WASH/WinS evaluations and develop methodological guidance for analysing these criteria.
11. Disseminate and familiarize staff involved in evaluation with the new UNICEF guidance for WASH sustainability checks. Depending on needs, complement the existing guidance with more detailed definitions, as well as instructions and tips for sampling, data collection and analysis to improve the reliability of data and allow for cross-country comparisons and trends analysis.
12. Evaluate the 'Three Star Approach' for WinS, which has been presented and promoted by UNICEF and other development agencies as an effective approach to reducing bottlenecks to scaling up, but for which supporting evaluation evidence is lacking.
13. Carry out a comparative cost-effectiveness evaluation of different programmatic strategies and implementation approaches to guide the further modelling/refinement of UNICEF WinS programming, focusing on the quality of programme design and implementation, behaviour change, especially handwashing, and sustainability.

ANNEX: EVIDENCE BASE

Country	Year	Title	Quality rating
Bangladesh	2008	Evaluation of piloting school sanitation & hygiene education (SSHE) in selected secondary schools (2004-2008)	Fair
Bosnia and Herzegovina	2013	Final evaluation of the UN MDG Achievement Fund sponsored “Securing Access to Water through Institutional Development and Infrastructure” joint UNDP and UNICEF project (2009-2013)	Satisfactory
Burkina Faso	2009	Evaluation des investissements en infrastructures réalisés par l’UNICEF (2006-2008)	Satisfactory
Burkina Faso	2012	Evaluation finale du projet « Approvisionnement en eau potable, assainissement de base et hygiène dans les provinces du Ganzourgou et de la Gnagna » (2007-2010)	Satisfactory
Burundi	2013	Evaluation of the WASH project in the integrated rural villages of Nkurye and Murembera in the commune of Giharo in the province of Rutana (2010-2013)	Satisfactory
Democratic Republic of the Congo	2009	Évaluation du programme « Village et École Assainis » (2006-2008)	No rating
Democratic Republic of the Congo	2012	Évaluation du programme « Village et École Assainis » (2009-2011)	Fair
Djibouti	2011	Evaluation des approches de promotion d’hygiene utilisées dans le cadre des activités du comité national de promotion d’hygiène (2008-2010)	No rating
Egypt	2008	Assessment of Revolving Funds to Improve Sanitation and Hygiene Practices Program (2000-2010)	No rating
Egypt	2010	Evaluation of the Integrated School School Sanitaiton and Hygiene (2006-2009)	No rating
Ethiopia	2010	Evaluation of Netherlands-UNICEF Water Initiative (Nuwi) (2007-2009)	Fair
Ethiopia	2012	Evaluation of the Government of Ethiopia WASH programme supported by EU-UNICEF (2007-2011)	No rating
Ghana	2009	Report on Evaluation of Ghana’s Guinea Worm Eradication Programme (2005-2007)	No rating
Ghana	2012	Evaluation of the Government of Ghana - UNICEF Integrated Approach to Guinea Worm Eradication through Water Supply, Sanitation and Hygiene in Northern Region (I-WASH) (2007-2012)	Satisfactory
Guinea and Guinea-Bissau	2009	Evaluation of the WASH activities undertaken to prevent and control cholera outbreaks in Guinea-Conakry & Guinea-Bissau	Highly satisfactory
Haiti	2013	Evaluation de projets financés par l’UNICEF dans le domaine de l’eau, l’assainissement et l’hygiène au niveau de 50 écoles du département de l’Ouest (2011-2013)	Fair

Indonesia	2009	Government of Indonesia - UNICEF Water and Environmental Sanitation Program in Indonesia, Assessment (2007-2009)	No rating
Indonesia	2013	Ex-post Evaluation of Water, Sanitation and Hygiene Programme in Eastern Indonesia (2007-2012)	Fair
Indonesia	2014	Final Evaluation of the WASH in School Program (WISE) (2011-2013)	Fair
Kenya	2012	Evaluation of SOPO Program, Nyanza and Rift Valley Provinces (2010-2012)	No rating
Kenya	2013	WASH programme review (2009-2013)	No rating
Lao People's Democratic Republic	2010	Hygiene Education Toolkit Evaluation (1997-2009)	No rating
Liberia	2012	Evaluation of WASH interventions in urban slums of Monrovia and Buchanan (2011-2012)	Fair
Liberia	2013	An evaluation of ECHO-Funded Water, Sanitation and Hygiene (Urban WASH- II) Project in Monrovia (2012)	Fair
Malawi	2011	Mid-Term review of UNICEF-Malawi implemented WASH project (2006-2011)	No rating
Malawi	2012	Sustainability check of water and sanitation facilities in Malawi (2012)	No rating
Mali	2015a	Evaluation du programme WASH à l'école (co-financement Spanish NatCom) (2011-2014)	Satisfactory
Mali	2015b	Dubai Cares WASH in schools initiative in Mali: Impact evaluation report (2011-2014)	Satisfactory
Nepal	2009	Final evaluation of the Hygiene Improvement Project: Hand Washing with Soap and Point-of-Use Water Treatment Initiative (2006-2009)	No rating
Nigeria	2014	Evaluation of WASH within the UNICEF Nigeria Country Programme of Cooperation (2009-2013)	Fair
Pakistan	2012	Evaluation of the Early Recovery Scaling-up of Rural Sanitation in Flood Affected Districts (RuSFAD) phase III (2012)	Satisfactory
Pakistan	2014	Evaluation of the UNICEF Sanitation Programme at Scale in Pakistan (SPSP) Phase 1 (2013-14)	Satisfactory
Rwanda	2011	Sustainability check for the "Acceleration of Access to Water Supply, Sanitation & Hygiene towards Reaching Rwanda's Millennium Development Goals" Programme (for 2011)	No rating
Rwanda	2013	Second sustainability check for the "Acceleration of Water Supply, Sanitation & Hygiene towards Reaching Rwanda's Millennium Development Goals" Programme (2013)	No rating
South Sudan	2009	Mid-term evaluation of the Increased Access to Safe and Sustainable Water, Sanitation and Hygiene Facilities Project in Rural Communities in Southern Sudan and the Three Transitional Areas of Abyei, Blue Nile State and South Kordofan (2007-2009)	No rating

South Sudan	2011	Final evaluation of the Increased Access to Safe and Sustainable Water, Sanitation and Hygiene Facilities Project in Rural Communities in Southern Sudan and the Three Transitional Areas of Abyei, Blue Nile State and South Kordofan (2007-2011)	No rating
State of Palestine	2012	UNICEF water, sanitation and hygiene programme evaluation (2006-2010)	No rating
Sudan	2012	External programme evaluation of the UNICEF Assisted Water, Sanitation, and Hygiene Programme in Sudan (2002-2010)	Satisfactory
Timor-Leste	2015	End of Project Evaluation "Improving Access to Water, Sanitation and Hygiene (WASH) in Rural School and Communities through Capacity Development"	Satisfactory
Zambia	2012	Assessing the sustainability of wash services in Masaiti, Mpongwe, Lufwanyama , Petauke, Katete, Nyimba, Choma, Kazungula and Mazabuka districts (2012)	No rating
Zambia	2013	Sustainability of WASH services in Masaiti, Mpongwe, Lufwanyama, Petauke, Katete, Nyimba, Choma, Mazabuka, Monze, Siavonga, Mansa, Nchelenge, Solwezi and Mwinilunga Districts (2013)	No rating
Zimbabwe	2011	ZimWASH end-term evaluation: Addressing water and sanitation needs of the rural poor in the context of HIV and AIDS in Zimbabwe (2006-2011)	Satisfactory

All UNICEF evaluation reports are available at: <https://www.unicef.org/evaldatabase/>.

Endotes

¹ UNICEF Global WASH Strategy 2006-2015

² For more information on UNICEF WinS programming, please visit the following websites: https://www.unicef.org/wash/index_schools.html and <https://www.unicef.org/wash/schools/>

³ Sustainability checks are rapid, sample-based field surveys commissioned since 2009 by several Eastern and Southern African country offices and funded by the Government of the Netherlands. They provide a snapshot of sustainability in UNICEF WASH interventions.

⁴ Derived from: UNICEF Strategic Plan 2014-2017, *Realizing the rights of every child, especially the most disadvantaged* (2013); Braveman P., Gruskin, S., *Defining equity in health*, Journal of Epidemiology Community Health (2003), #57, p.254–258, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1732430/pdf/v057p00254.pdf>; WHO, *Equity in Health Systems*, 2015, <http://www.who.int/healthsystems/topics/equity/en/>

⁵ E.g. in Burkina Faso in the UNICEF 2009 report but not in the 2012 report, in Kenya in the 2013 report but not in the 2012 report, in DRC in the 2008 report but not in the 2011 report (criteria not consistently endorsed), only partially in Ethiopia 2012, Burundi 2013 and Indonesia 2014, and not in Mali 2015.

⁶ E.g. in UNICEF Mali 2015a

⁷ Probably because it is considered that disabled school children can rely on others to fetch water for them.

⁸ In particular, the need for revising latrine designs was pointed out in UNICEF Ethiopia 2012, UNICEF Palestine 2012, UNICEF Haiti 2013, UNICEF Liberia 2013, UNICEF Indonesia 2014, UNICEF Pakistan 2014 and UNICEF Timor Leste 2015.

⁹ For example, the case of latrines being separated by design and in practice but the distance between both blocks is insufficient to ensure privacy was highlighted in UNICEF Burkina Faso 2012 and UNICEF Mali 2015 among others.

¹⁰ UNICEF Ethiopia 2012 and UNICEF Mali 2015a and Mali 2015b.

¹¹ UNICEF Mali 2015a

¹² UNICEF Nepal 2013, UNICEF Nigeria 2014, UNICEF Bangladesh 2014, UNICEF Pakistan 2014, UNICEF Mali 2015a

¹³ In Mali (UNICEF 2015a evaluation report), the WASH in schools programme did carry out a formative study on menstrual hygiene management and water kettles were provided for anal cleansing as part of the school hygiene kit, however this kit included no sanitary pads or other menstrual hygiene management supplies. The UNICEF Timor-Leste 2015 evaluations noted that “no provision was made in school toilets for menstruating girls”. The UNICEF Kenya 2013 report highlight on the contrary that “bathrooms for menstrual hygiene management are included in all latrine facilities so that adolescent girls can maintain adequate personal hygiene during menstrual periods and therefore remain in school”.

¹⁴ Due to inadequate evaluation design, difficulties of tracking enrollment, attendance, participation and cognition, and contextual factors and confounders.

¹⁵ Most of these impact evaluations found no effect or were inconclusive.

¹⁶ UNICEF Mali 2015b

¹⁷ Definition derived from: DFID, *Upscaling field level pilot research experiences*, (2003), <http://r4d.dfid.gov.uk/Project/2767/>; IICD, *Piloting and upscaling: Both crucial stages in social innovation* (2010), <http://www.iicd.org/IICDCorporateBlog/2010/09/08/piloting-and-upscaling-both-crucial-stages-in-social-innovation>; English Collins Dictionary.

¹⁸ UNICEF Bangladesh 2008, UNICEF Burkina Faso 2009, UNICEF DRC 2009, UNICEF Indonesia 2014, and UNICEF Mali 2015

¹⁹ UNICEF Malawi 2011, UNICEF Indonesia 2013, UNICEF Haiti 2013, UNICEF Mali 2015. Examples of tippy-taps are available online, notably at: <http://www.tippytap.org/>

²⁰ The ‘Three Star’ approach for WASH in schools is a phased approach aiming to achieve incremental WASH improvements in schools. It gives priority to behaviour change among schools children before hardware interventions. The behaviour change strategy is primarily based on the setup of collective and daily WASH routines within the school schedule. A certification process is linked with each step of improvement, the ‘first star’ being the lowest cost one and the ‘third star’ meaning that the school comply with national standards for WASH in schools. More details are available in the Three Star Approach Field Guide published by UNICEF and GIZ in 2013: https://www.unicef.org/wash/schools/files/UNICEF_Field_Guide-3_Star-Guide.pdf

²¹ Such funding has benefitted development activities such as WASH improvements in schools (e.g. in Mali, DRC, Philippines, etc.).

²² UNICEF DRC 2009 and 2012, UNICEF Laos 2010, UNICEF Ghana 2012, UNICEF Bosnia Herzegovina 2013, UNICEF Kenya 2013, UNICEF Haiti 2013, UNICEF Indonesia 2014, UNICEF Nigeria 2014, and UNICEF Mali 2015a

²³ UNICEF DRC 2009 and 2012, UNICEF Haiti 2013, UNICEF Indonesia 2014, and UNICEF Mali 2015a

²⁴ UNICEF DRC 2009 and 2012, UNICEF Zimbabwe 2011, UNICEF Pakistan 2013 and 2014, and UNICEF Mali 2015a

²⁵ Sources for these findings on institutional arrangements and capacities are, notably: UNICEF Egypt 2008, UNICEF DRC 2009 and 2012, UNICEF Kenya 2013, UNICEF Burundi 2013, UNICEF Bangladesh 2014, UNICEF Indonesia 2014, UNICEF Mali 2015a, etc.

²⁶ Definition derived from: OECD / DAC, *Criteria for Evaluating Development Assistance* (2007), <http://www.oecd.org/dac/evaluation/49756382.pdf>, and DFID, *Sustainable Livelihoods Guidance Sheets* (2000), <http://www.eldis.org/vfile/upload/1/document/0901/section2.pdf>.

²⁷ Proportion of schools with functional latrines where open defecation was not reported or observed.

²⁸ The sustainability factors in WASH are often examined using the “F.I.E.T.S.” framework: financial, institutional, environmental, technical and social factors. (See notably: http://akvopedia.org/wiki/FIETS_sustainability_principles, <http://wash-alliance.org/sustainability/>, http://www.waste.nl/sites/waste.nl/files/nodefiles/421/fiets_sustainability_approach.pdf. As previously

explained, these various factors described in the following sections have not been systematically analysed in the reviewed reports, making it difficult to quantify their presence/absence in UNICEF-supported WinS programmes.

²⁹ See also earlier on the pupil:latrine ratio. It is to be noted that there is no recommended ratio of pupil per water point.

³⁰ Found in UNICEF Laos 2010, and UNICEF DRC 2009 and 2012. Other design issues and technical defects were found in UNICEF Zimbabwe 211, UNICEF Rwanda 2013, and UNICEF Timor Leste 2015.

³¹ The most common issues are: Uncompleted works; broken hand pumps and taps; dray boreholes or wells; broken or cracked walls, latrines slabs and handwashing and water containers; damaged pipes; inadequate slopes leading to stagnation of water and urine and bad odour; and loose compaction of the backfill.

³² The UNICEF Burkina Faso 2009, UNICEF Timor Leste 2015, and UNICEF Mali 2015a evaluations list the pros and cons of both models. The first model is reported to instil more local ownership, and therefore use and maintenance of the facilities. The community and the school have the opportunity to customise their facilities to their specific needs and invest more efforts in order to make discreet improvements on the proposed design. This model also reduces costs and, according to some evaluations, improves the quality of construction. The same latter argument is nevertheless put forward by the partisans of the second model, underlining that quality, and thus sustainability and children's safety, are better achieved through a specialised civil engineering company having the necessary technical and logistical means at its disposal. It is selected through a competitive process based on skills and experience. A contract governs its relations with UNICEF with standard rules, incentives and sanctions aiming to minimise the risk of delay or conflict. It is in a better position to supply high quality building material and equipment. In case of defect appearing in the 12 months following the substantial completion of work, the contractor is compelled to fix or rebuild at its own expenses. Furthermore, for UNICEF and its implementing partners, a single contractor is easier to train, manage, coordinate and supervise than multiple, geographically scattered local builders. This is particularly the case for medium to large-scale programmes. However, specific measures should be adopted to ensure effective involvement of beneficiaries – including during the school holidays. As an alternative to a private service provider, Timor Leste contacted local CSOs to build school sanitation facilities. The rationale behind this choice was that they were more experienced in community mobilisation and were ready to work in remote areas, which was not the case for private companies. They also had strong technical expertise whereas previously contracted companies showed poor performance. In conclusion, this evaluation review concludes that there is no one-size-fits-all model.

³³ For instance, when latrines are not being used by girls, it suggests that girls may not have been consulted during the siting of the latrines. Bad smell can also be due to improper position of latrine block to the wind preventing proper ventilation. These aspects were addressed by the use of the latrine siting checklist.

³⁴ UNICEF Mali 2015a

³⁵ UNICEF Egypt 2008, UNICEF Indonesia 2009, and UNICEF Mali 2015a

³⁶ UNICEF Laos 2010, UNICEF Indonesia 2013, UNICEF Pakistan 2013 and 2014

³⁷ UNICEF Mali 2015a

³⁸ UNICEF DRC 2009 and 2014, UNICEF Malawi 2012, UNICEF Haiti 2013, and UNICEF Mali 2015b

³⁹ UNICEF Rwanda 2013, and UNICEF Timor Leste 2015

⁴⁰ The one-off nature of teachers' WASH training and the lack of institutionalisation was highlighted in the following reports: UNICEF Egypt 2008, South Sudan 2009, Djibouti 2010, Malawi 2012, Indonesia 2013, UNICEF Pakistan 2014 and UNICEF Bangladesh 2014

⁴¹ Notably in UNICEF Guinea Conakry and Guinea Bissau 2009, UNICEF Laos 2010, UNICEF Kenya 2012, and UNICEF Bangladesh 2014.

⁴² UNICEF Laos 2010, UNICEF Ghana 2012, UNICEF Ethiopia 2012, UNICEF Djibouti 2010 and UNICEF DRC 2009

⁴³ UNICEF Burundi 2013

⁴⁴ Not enough persons are trained or the selection of participants is inappropriate; Training of teachers and school management committees are partial, do not include facilities maintenance and repair; Refreshers are missing; Children are not shown how to properly use the facilities; Training and post-material as well as educational/communication tools are not consistent with each other, especially when they have been developed by different institutions or consultants at different times without overall supervision; They are not well adapted to a young audience, to children from different age groups or to easy use by teachers in large classes; They are theory and knowledge oriented rather than practical and play-based; and they are not provided in sufficient quantity, not well packaged or not covered in plastic so they quickly deteriorate.

⁴⁵ Notably UNICEF DRC 2014 and UNICEF Mali 2015a. Integration was not systematic however.

⁴⁶ Notably highlighted in UNICEF Mali 2015b.

⁴⁷ For example, the UNICEF Bangladesh 2008 report notes that "student brigade activities [are] very appreciated in communities for 90% of interviewees and among the teachers and children in the same proportion". The UNICEF Nepal 2009 report comments that "the overall finding clearly shows the positive contribution of schoolchildren in imparting knowledge to the family members and the community about the importance of hand washing with soap and on water treatment methods".

⁴⁸ With the exception of the Mali case developed above.