IOB UNICEF WASH SUB-STUDY

A case study for the IOB evaluation of the UN for the Dutch development cooperation policy

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Contents

ABBREVIATIONS

AfDB	African Development Bank
AKV	General Costs Allowance (Apparaats Kosten Vergoeding)
AKVO	"Water" in Esperanto. Name of Dutch NGO
AR	Annual Report
ARR	Annual Results Report
BEMO	Memorandum of Review (of a project/programme proposal)
BUZA	Ministry of Foreign Affairs, the Netherlands
CAR	Central African Republic
CATS	Community Approaches to Total Sanitation
CLTS	Community-Led Total Sanitation
Cordaid	Catholic Organization for Relief and Development Aid. Dutch NGO
COFORWA	Compagnons Fontainiers Du Rwanda
CPAR	Canadian Physicians for Aid and Relief
CRAP	CLTS Rapid Appraisal Tool
DAC	Development Assistance Committee of the OECD
DFID	Department for International Development, UK
DGIS	Department General of International Cooperation, the Netherlands
DME	Directorate for the Environment, Water, Climate and Energy
DNSP	Direction Nationale de la Santé Publique, Benin
DWD	District Works Department, Ghana
ECOSOC	Economic and Social Council, United Nations
ESARO	East and Southern African Regional Office, UNICEF
EU	European Union
EVD	Ebola Virus Disease
EWB	Engineers Without Borders (NGO)
GEROS	Global Evaluation Oversight System
HH	Household
HWT	Home Water Treatment
ICAI	Independent Commission for Aid Impact, UK
IGG	Inclusieve Groene Groei dept. (Inclusive Green Growth). Formerly DME.
IOB	Inspection for Development Cooperation and Policy Evaluation, the Netherlands
IRC	International Water and Sanitation Centre, The Hague
IWRM	Integrated Water Resources Management
JICA	Japan International Cooperation Agency
JMP	Joint Monitoring Programme, UNICEF and WHO (for WASH)
JSR	Joint Sector Review
MinBuZa	Ministerie van Buitenlandse Zaken (Ministry of Foreign Affairs, the Netherlands)
MORES	Monitoring Results for Equity System, UNICEF
MTR	Mid-Term Review
NGO	Non-Governmental Organisation
ODF	Open Defecation Free
OECD	Organisation for Economic Cooperation and Development
O&M	Operation and Maintenance
OR	Other Resources (other than membership payments) UNICEF
OVC	Orphans and Vulnerable Children programme, UNICEF Malawi
PCA	Programme Cooperation Agreements (between UNICEF and NGOs)
PPP	Public-Private Partnership
RNE	Royal Netherlands Embassy
RR	Regular Resources (from membership payments) UNICEF
SAG	Sanitation Action Groups
SC	Sustainability Check
SDGs	Social Development Goals
SMART	Specific, Measurable, Appropriate, Reliable, Time-bound
SNV	Dutch-based Development NGO
SODIS	Solar Disinfection
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VLOM	Village Level Operation and Maintenance
WASH	Water, Sanitation And Hygiene
WHO	World Health Organisation

WPC	Water Point Committee

EXECUTIVE SUMMARY

Study rationale and objectives. This sub-study of the cooperation with UNICEF for improved water supply, sanitation and hygiene (WASH) is part of IOB's policy review of the Dutch contribution to the UN organisation and programmes. Its objectives were to provide insight in the motivation and forms of financing of the cooperation with UNICEF, to assess the effectiveness and efficiency of the activities and to evaluate the contribution to the realisation of the water sector goals and targets of the Netherlands and UNICEF's own efficiency and effectiveness goals. Data collection was through a desk study of WASH policy and strategy documents and general evaluation reports of the Netherlands and UNICEF and case studies of the two main regional WASH programmes of UNICEF supported by the Netherlands in East and Southern Africa (5 countries) and West and Central Africa (9 countries). For budgetary reasons there were no field visits. Interviewing was limited to IGG (Dept. for Inclusive Green Growth), the former Directorate for the Environment, Water, Climate and Energy (DME) and questions and answers by email with UNICEF WASH in New York, Nairobi and Dakar.

WASH policy of the Netherlands. In the Netherlands water resources management and WASH are one of the four themes of Dutch development cooperation. The targets are 25 million new users of improved sanitation by 2015, and 25 million new users of safe water by 2018[1]. Financing for UNICEF-WASH programmes amounted to EUR 105,7 million from 2012-2015 UNICEF was the main multilateral channel for WASH financing in 2012-2015. Five reasons were given for this choice: (1) as a UN system organization UNICEF can create a platform for international agreements, norms and standards; (2) there is a high synergy with the Dutch development policy and goals; (3) UNICEF's WASH programme with national governments is large-scale, worldwide and has a reputation of good effectiveness; (4) UNICEF's continued presence is a great advantage for the development of capacity and sustainability and (5) UNICEF WASH strategy includes targeting the poor, stimulating innovation, involving local and donor expertise of e.g. NGOs, mainstreaming gender equity and ecological sustainability and enhancing cooperation with other UN agencies. Savings to Dutch human and financial resources by using a single multilateral channel rather than a combination of different financing channels was a further, not mentioned reason.

UNICEF's system benefits. Evidence from the two case studies and the comparative evaluation of different financing channels confirmed that in the period under study (2012-2015) UNICEF created a platform for global international agreement, norms and standards, in particularly for sanitation and hygiene. All government partners had adjusted their national sanitation policy and programmes to CLTS-type approaches and sometimes also adopting the prime behavioural goals.

Synergy with Dutch WASH policy. Good synergy was found with Dutch development cooperation policy regarding theme, disadvantaged regions, focus countries and programme objectives. Of the 18 countries involved 11 fell in the Dutch group of 15 focus countries. All lagged progress in sanitation and a number also for water supply. Within the countries the programme went to the more disadvantaged districts, although few countries gave baseline data or other relevant area statistics of the programme areas, such as mortality and malnutrition rates of young children. All countries gave high priorities to improving sanitation and hygiene and decentralised and community managed approaches with local governments. Sustained access to basic water supply and sanitation and improved sanitation and hygiene practices for all were common goals

[1] IGG is developing a new WASH SDG6 policy document, aiming at access to safe drinking water for 30m new users and access to at least basic safe sanitation for 50m people. It will go for approval to parliament before the end of 2016.

Comparative advantages. The size and effectiveness of the two UNICEF regional programmes in Africa were definite advantages. Dutch support for WASH went to 14 and then 11 countries: The Comoros, Malawi, Mozambique, Zambia, Benin, Central African Republic, Ghana, Ivory Coast, Mali and Mauritania. In Guinea, Liberia and Sierra Leone, the funds were shifted to abating the Ebola crisis. In November 2015 these countries re-joined with a new tranche of US$ 20.18m to replenish the funds re-allocated to abate the Ebola crisis. The programme duration was extended by two years to end 2018 (Ministry of Foreign Affairs and UNICEF, 2015).

Effectiveness. Effectiveness in terms of direct outputs and outcomes was generally highly satisfactory. At the end of the ESARO programme and halfway through the WCARO programme, the combined results were, for water, 4.5 million new water users, 104% of the combined regional targets, while WCARO was still half-way. For sanitation almost 4.4 million people (71% of the combined target) had been reached by freedom from open defecation programmes and for hygiene almost 4.1 million people had been reached (66%). No combined data on ODF villages was available, because this target was introduced later and so monitoring did not run from 2012 to 2015. School sanitation also scored satisfactory overall, with 72% of schools (almost 1,600) and 90% of student targets reached. This data combines end figures of the ESARO programme with mid-term data of the WCARO programme. Only the 61% output for WASH facilities in rural health centres was not satisfactory according to OECD-DAC's Operational Guidelines for Classifying Evaluation Findings. This was due to the low output (46%) in ESARO. In WCARO output was on track with 65% achieved half-way.

Independent evaluations confirmed this effectiveness. In representative samples all water systems (502) and facilities in 213 schools and 51 health centres visited between 2012 and 2015 were indeed present and completed (no ghost results). Only two water points or 0,4% were in semi-public places: the compound of a women's organisation and a chief's compound. For sanitation the programme result in seven countries was better than the national rural JMP data: Malawi +4%, Mozambique + 51%, Zambia + 27%, Benin + 73%, Ivory Coast + 38%, Mali +6% and Mauritania + 53%. The high behavioural impact outcomes claimed by UNICEF WCARO were however not supported by sound measurement nor confirmed by sustainability study data. ODF data was limited to the sustainability studies; it was not available for the whole programme. The independent evaluations on good practices also had problems with measurement quality. Measurement was scientifically better in WCARO, as UNICEF WCARO learned from the experiences and the independent external review of the instrument in the ESARO programme. The absence of baseline data against which progress was measured impeded attribution of benefits to the Netherlands' support.

The comparison of financing modalities found no difference in programme effectiveness between the types of channels. In outputs/outcomes all four channels (bilateral, multi-lateral, NGOs and private sector) scored equally well. However, the source of this finding was only one evaluation, which had a low and non-representative sample size, so no definite conclusion was possible. It was also not possible to compare the relative programme scales and effectiveness of the compared channels, because the channel evaluation contained no quantitative data on outputs/outcomes of the four evaluated UNICEF programmes and the five NGO programmes.

Especially WCARO introduced innovations, such as manual drilling, piloting solar-powered water supply and home water treatment. Five Dutch NGOs provided expertise on aspects for which UNICEF had a specific demand: monitoring (AKVO, IRC and SNV), manual drilling (Practica), training (SNV), knowledge management and sector learning (IRC) and WASH in institutions (CORDAID). Expertise on market development for sanitation and hygiene was not (yet) used. There were no Dutch WASH secondments to strategic UNICEF offices. Cooperation with other UN agencies and between UNICEF WASH and related UNICEF programmes such as education and gender, which UNICEF supports at the global level, was rare.

Efficiency. At system level a relatively modest share of UNICEF core funds went to management costs (7% in 2015). However, the accounting system did not give insight into the total share of the combined core and

programme costs to management at the head office, regional offices and country offices levels. The cost of the UNICEF offices in the two case studies was modest: 3% for the regional office in the ESARO programme, 2% for the regional office and 1% for UNICEF's head office in the WCARO programme. To the head office overhead must be added the standard 7% share of each programme funds that goes to UNICEF core funds, in addition to the voluntary contributions that member governments pay. Contractual services (mostly NGOs and private sector) covered 21% of the WCARO budget, including overhead costs (not specified in the accounts). For ESARO the accounts did not give details on this financial post.

Other than reports in Dutch public media sometimes suggest[2], the Dutch channel evaluation did not reveal high overhead charges and unspecified organizational costs for any of the four evaluated channels[3]. In this study all reported overheads[4] were well below the international norm of 20%[5]. Limitations for transparent and reliable data were the absence of an agreed cost definition and the ways local programme conditions might increase such costs.

The case studies confirmed the efficiency. In ESARO all outputs and outcomes were achieved within the given time and budget. In WCARO delays in water supply outputs and outcomes had understandable causes. The target of 300 manually drilled wells in Ivory Coast, which were cheap and quick to build, had to be reduced to 60, because they suffered from high failure (52%) due mainly to geological constraints, a lack of local implementation capacity and the associated higher support costs of INGO Practica. Lower targets for new water users WASH in schools were explained by going for the most disadvantaged areas in Mali and Mauretania, with smaller villages and schools and higher costs of construction (transport, implementers from outside, etc.). The reductions were partly compensated off by raised targets for home water treatment.

The partners further decided to raise budget for the remaining period to finance the higher cost. UNICEF gave a 3% increase, and the remaining extra costs were to be met by an increase of 9% from the communities/local government. The national governments decided to decrease their share by 5%. No increase was asked from DGIS. WCARO acknowledged the problem of mobilizing national funds via the Ministries of Finance. So far two countries dis this. Cote d'Ivoire allocated funding (65m FCFA) for transport of the regional directorates to supervise the programme and Guinea allocated $1.1 million for the drilling of additional water supply boreholes in the programme area. Mauritania began exploring the option to sign a convention for fund disbursement through the public finance system. Nevertheless, most countries' technical bodies contributed more than expected in term of staffing, logistics, per diem for field supervision, meetings, etc.. However these inputs and those from communities and households were not formally calculated and thus are not well captured in the financial reports (Kelly-Ann Nailor, pers. com).

As the WCARO programme was still running, unit costs realised and the difference with budgeted costs (% in brackets) were only available for ESARO. None of the low level costs were however complete. The highest unit cost was for new water systems, mostly drilled wells with hand pumps: USD 18 per user (+23%). For repaired facilities it was US$ 6 (-49%), but the independent evaluations showed that this is too low and will reduce the long-term functionality of water services.

The unit cost of sanitation promotion was US$ 4, the same as budgeted. The reported unit cost range in UNICEF's independent global sanitation evaluation was US$ 8-14. However, in neither case did this cost cover the necessary support cost to sustain ODF and basic latrine use after ODF certification.

[2] As reported in Rijsdijk and van Apeldoorn, 2016.
[3] Bilateral, multilateral and private sector financing channels. See Comparison of the different financing channels, p. 65.
[4] 10% for UNICEF WASH, 10%-15% for NGOs and 5% and 8% for programmes with the private sector, but without clear definitions of each organisation of what they booked under overhead costs.
[5] Rijsdijk and van Apeldoorn, 2016, without source. The UN Chief Executive Board for Coordination gave norms of between 14% and 11% for UN organizations and works on harmonisation since 2009.

The unit cost of hygiene promotion was US$ 3 (+54%), but the cost of monitoring and supporting sustained behaviour must still be added. A typical school provision cost US$ 11 per student (-42%) but one typical health centre facility was under-budgeted, with the real cost US$ 18 (+117%). (All figures rounded off).

Both water and sanitation unit costs in the programme were below the norms of IGG (US$ 25 for water supply and US$ 20 for sanitation).

Social inclusion and equity. Although the reports gave no explicit data from e.g. baseline situations, UNICEF mentioned that both programmes targeted especially poor and marginally served districts. Many districts were also seen to be border districts or located in the outskirts of countries. Field strategies and data on access and other benefits (decision making, payments) for the most disadvantaged groups were absent and were at the very initial stage for equity between women and men. Two cases only were reported of waving water payments for very poor households and two of adjusted toilets for physical disabled children or patients, all local initiatives. Moreover, UNICEF Zambia withdrew the sanitation grant for 270 vulnerable households because CLTS is a non-subsidy programme. The low incidences may reflect that adjustment to vulnerability was not a specific objective and therefore not structurally reported on.

Gender analysis was impeded by having only sex-disaggregated data for the composition of village committees. The high proportion of women volunteers - in Ivory Coast even 100% female WASH committees- may have given women more control, but also placed the burden of keeping WASH going disproportionally on female shoulders. Positive was that nearly all latrine blocks in schools were separate for girls and boys and that the presence of water in schools facilitated menstrual hygiene for girls who had started their menarche, although this was not explicitly measured.

Sustainability. Sustainability pacts and checks were a new and unique instrument introduced by DGIS to achieve and monitor sustainable results across time. The instrument increased awareness of and commitment to sustainability. The quantitative data on effective community management of water services and post-certification status of ODF villages was much appreciated. Initially the tool was seen as a DGIS instrument. UNICEF's WCARO WASH advisor mentioned the additional time and money needed to go beyond the traditional outputs delivery approaches. Its foundation took time to develop and should be better integrated into the design and start-up of new programmes and its integration into national systems supported if its use is to be sustained. In completeness and comparability the used indicators were too many, while important ones were lacking. Technically, the measurement quality was generally acceptable, except for latrine hygiene and handwashing.

In the ESARO region technical sustainability indicators (functionality, water quantity and quality) were mostly satisfactory in OECD terms, except % water point downtime, which was often more than 2 days. For handpumps 2 days is considered to be the maximum acceptable downtime, because this is how long rural households can usually store water from a safe source[6]. Institutional, financial and environmental results were much weaker, with some exceptions. ODF status (no more open defecation) had declined, but in Mozambique and Rwanda stabilization was noted. Scores for handwashing scores were much lower than for sanitation and in case of trend measurement had steadily dropped over time.

In the WCARO region, with more recent construction, functionality and quantity of water supply were very satisfactory and quality satisfactory. A maximum of two days' water point downtime was also not measured here. On the other hand, institutional, environmental and financial sustainability of the water services were still weak. Formation and first year sustainability of village sanitation promotion committees and access to own household latrines were highly satisfactory except for Ghana (no data). Only Mali reported a very

[6] IGG reported that the two day criterion has been recently adopted.

satisfactory capacity to replace filled up latrines; elsewhere it was not reported what households did when pit latrines filled up. The sustainability of villages that remained free from open defecation one year after their certification was satisfactory in two countries and unsatisfactory in one. On hygiene only Benin showed valid and satisfactory data. Observed handwashing provision with water and soap was very satisfactory in Mauritania only. Water safety at home was a new subject. This data was either yet unsatisfactory or missing.

Both regions were at the initial stage of development of the local private sector to service water supplies and help households build affordable permanent toilets. Sanitary sludge management was not yet under development anywhere. For environmental sustainability the absence of a link with climate change was noted.

In sustainability measurement, definitions of indicators were not always present. Nor did either region define any common indicators and criteria for sustainability of services, institutions and practices at programme level. This limited comparability of results, but UNICEF began work to correct this. A (not representative) independent Dutch evaluation by Rijsdijk and van Apeldoorn (2016) further showed that the type of Dutch channel for financing (multilateral, bilateral, NGO and private sector) made no difference for sustainability results. All evaluated channels (bilateral, multi-lateral, NGOs and private sector) were least successful on sustainability.

Enabling national capacities. Regarding lasting partnership programmes with country governments with different donors joining the same programme and involving local NGO expertise for tasks for which the local government services have no or not yet the mandate and/or capacity, UNICEF had an advantage over other financing mechanism NGO programmes. In the two regional programmes partners shared in the costs: 14% in ESARO, 18% in WCARO. UNICEF further generated support for resource continuity from at least ten bilateral and international donors, although all came in at the country level and mostly for sanitation and hygiene and not, like the Netherlands at regional level and for the whole package.

UNICEF's advocacy and support to shift from the unsustainable subsidized household toilets to promotion of freedom from open defecation resulted in a massive re-orientation of national sanitation policies and programmes. UNICEF was a major contributor in aligning nine governments and at least 15 (inter)national and NGO partners to the same sanitation and hygiene principles and approach everywhere, with the exception of one unnamed NGO. Ten donors added support to CLTS in 15 ESARO/WCARO country programmes. However, longer-term results of sustaining ODF status and climbing the sanitation ladder remain to be achieved. UNICEF also put WASH in schools on the national and international agendas. Although not yet part of national programmes in the two regions, AfDB joined UNICEF in one country.

Capacity strengthening for water was at the implementation level and for sanitation at national policy level; at the local level UNICEF contributed to the capacity of local NGOs as CLTS facilitators and trainers of village volunteers. Involvement of government staff was limited. In WCARO countries also quantitative targets for enablement strengthening were set, resulting in two highly satisfactory, five satisfactory, and one (national rural water and sanitation policy) unsatisfactory result (50% met). Cases of budget increase were limited (Benin, Ivory Coast and Mozambique) Only one country (Mozambique) increased district support staff (for water only). Good governance was investigated in two countries only. Malpractice was rare (4 villages). Zambian district councils made a modest start on accounting for use of maintenance funds.

For monitoring and reporting clear arrangements were made with UNICEF and implemented as agreed. The problem was the record keeping at the ministry and the analysis beyond the individual reports, reflecting IGG's limited staff capacity for these large programmes. Review forms on progress and contents ('Beoordelingsformulier') were added to UNICEF progress reports, but no summary was made at programme level. AKVO coaching on real-time monitoring of water service functionality and ODF villages gave districts a

new hand on post-construction and post-CLTS campaign developments. It is a first step that was so far not linked to nationally financed and implemented monitoring and a post-implementation support system for villages by local governments.

The support of the Netherlands to the large regional programmes of UNICEF and national and local governments were an example of good donorship: long term commitment, full and timely payment, policy and programme coherence, more south-south cooperation and reduced fragmentation of donors, who when operating individually burden host governments with their special interests and requirements landscape of ODA providers. UNICEF Headquarters and regional officers commented positively on the quality of the partnership between UNICEF, the Netherlands and the national governments, in which DGIS contributed both financially and with the technical expertise of the DGIS water team and Dutch WASH organisations. Another strength was the predictable funding over several years, which maximised efficiency and effectiveness and benefited users. Points for the future were that the grants should have equivalent aims of developing local government capacity and the predictability of new funding linked to the gaps in the strategic WASH plan. Matching local demands with the capabilities and skills of NGOs from the Netherlands was another a challenge.

CONCLUSIONS

Sector targets. Dutch sector targets got a substantial boost from the two regional programmes: 4.5 million new water users, and 4.4 million people in CLTS programmes for sanitation, equal to 18% of the national target for drinking water and sanitation, with one to two more years still to go in nine countries. Sustainability goals were not yet met, the least so for the social and organisational aspects. They were too complex to be achieved in four or five years, when huge outputs and outcomes must be achieved at the same time.

Financing channel. As channel the choice for UNICEF made sense seen its contribution to international agreements, norms and standards size and the size and effectiveness of the evaluated regional programmes. Advantages came from UNICEF's international functions: advice on SDG 6, standard setting for and monitoring of world-wide progress on WASH in the annual Joint Monitoring Reports together with the WHO. At programme level the advantage was especially the long-term cooperation with national governments on WASH, with UNICEF using its core (non-earmarked) income to bridge any gaps in programme funding. This and its UN mandate for all child-related development, in which WASH is prominent, made that in the evaluated programmes national governments trusted UNICEF and adjusted their policies and programmes when good effectiveness and efficiency were demonstrated.

Effectiveness and efficiency. Programme effectiveness and efficiency were confirmed by the evaluation of the two regional programmes. In ESARO region the outputs for water supply were surpassed, while targets for the promotion of sanitation and hygiene were likely to be achieved. In WCARO region water was on track. Hard data on the numbers of new people who created toilets under the influence of the promotion programmes could not be traced, however, because baseline data in programme districts were not collected or not used for reporting against. For schools, the target of new students with access to WASH – with separate blocks for girls and boys – was also met or (likely to be) surpassed. Only health centre targets in ESARO were not fully met. In WCARO they were on track.

The results in ESARO were achieved within the agreed time and budget. WCARO was less good, with outcomes only on track for water supply. The reasons were generally understandable: teething problems with a new drilling method, increased costs of materials necessitating new designs, civic unrest in CAR and Mali and priority to remote, small and underserved communities in CAR, Côte d'Ivoire and Mauritania. As the financial targets showed signs of cost overruns, increase of UNICEF and national funds and downsizing of the water targets made sense, but not the reduction of national contributions and the shifting of the grown

financial burden to local governments and communities. New donors also came in, but only to support a single component (sanitation) in individual country programmes, and not, as the Netherlands, support a comprehensive WASH programme at region level.

The evaluation of Rijsdijk and van Apeldoorn found no significant differences for programme effectiveness and efficiency of the four main financing channels – multilateral, bilateral, NGO and private sector[7]. Overheads and organisation costs (in Dutch also known as AKVs) were acceptable, as they remained well below accepted international standard of 20%. However, this data cannot be considered conclusive, as it was based on one non-representative evaluation. UNICEF used no fixed ceiling and administrative costs were not included in financial reports and DGIS had no clear agreements on these costs including which costs could be booked as AKV or overhead. In the WCARO programme NGOs can charge pro-rata for in-country management and support staff, operational costs, and planning, monitoring, evaluation and communication. INGOs can charge 7% administrative costs for their headquarter (Kelly Ann Naylor, pers. com.).

Commitment and accountability. UNICEF's commitment to WASH was confirmed by the doubling of the annual use of UNICEF's core funds from US$ 663m in 2012 to c. US$1.2m between 2013 and 2015. Use of the earmarked funding was well accounted for by UNICEF. However within DGIS the system of monitoring reports and follow-up was not adequate, probably related to limited human resources and an increasingly large share of the financial resources. Systematic and rolling overviews per country and region of all reports due and received were lacking, as was a rolling overview on physical and financial progress and content performance, including cross-cutting aspects. In consequence management responses from the field and the ministry often had an individual rather than a structural character[8].

RECOMMENDATIONS

The four general recommendations for the Netherlands government are (1) to continue the contributions to UNICEF WASH especially to large regional programmes because of their large scale effectiveness in outputs and outcomes; (2) to combine UNICEF and Dutch NGO contributions for these programmes because NGOs complement the capacities of UNICEF, (3) not to reduce the core contributions to UNICEF because the they are essential for the system functions and flexibility and because the greatest part goes to the long-term field programmes, including to bridge gaps in programme funding by donors and (4) increase transparency n management costs by agreeing with the partners on definitions and reporting on these costs at each level of the cooperation programmes. The four specific recommendations are:

Follow up on Sustainability. Sustainability requires follow up support with agreed targets and special expertise to build the capacity of local level government to train and support the communities on all sustainability aspects ('FIETS'). UNICEF can play a leading role here by developing standards for local management and financing, including on financial transparency, accountability and management supervision. A second focus is finding sustainable financial and institutional solutions for replacing DGIS-financed sustainability checks and real-time monitoring by national monitoring systems and developing long-term local government support systems for villages with problems, since in the long run external financing of support by local NGOs is not sustainable. UNICEF WCARO recommended to add a methodology for the calculation of the in-kind contribution of the government and the communities to get a more complete and true picture of cost-sharing.

Involvement of Dutch NGOs from the start. Involving Dutch NGOs in joint programme formulation makes it possible to benefit more from the complementary expertise of the two types of partners. For NGOs this

[7] See footnote 5 above

[8] IGG commented that to address the challenge of the growing support needs it increasingly involves the IRC International Water and Sanitation Centre in the monitoring of the programme, the preparation of the annual UNICEF-DGIS meetings and the review of sustainability checks and management responses.

would relate to e.g. capacity building for demand-based behaviour change (implementation and monitoring), life cycle programming, market approaches to low-cost durable sanitation, gender equity and real time monitoring.

Sustainability monitoring. In two regional workshops with UNICEF, the national monitoring institutions and external monitoring specialists the present monitoring instrument should be simplified, the reliability of measurement strengthened and a common core set of indicators agreed on for comparability at programme level. National capacity should be developed at decentralised (implementation) level and at national level, e.g. a WASH data base based on AKVO FLOW experience. External quality control can preserve the nationally appreciated independency of the data. UNICEF should stimulate other donors to join in implementing and supporting sustainability and real-time monitoring, similar to the Rwanda government, which included sustainability checks in its new programme with JICA. Furthermore, reporting progress through a set of baseline, mid-term and end surveys can show impacts more reliably when it is part of a rolling programme, in which later to be served villages serve as controls. Only UNICEF CAR planned this with the local university of Bangui, but service delivery for returning villagers who had fled the civic unrest then got priority. This was also the only proposal that listed the key indicators on which local data would be collected through the baseline studies.

DGIS monitoring. To improve monitoring and reporting for accountability and follow up and enhance sustainability it is advised that DGIS develops and uses rolling overviews of reports, physical and financial implementation progress and key quality aspects of local processes, in particular the development of effective local government support capacity.

INTRODUCTION

Policy review of Dutch cooperation with the UN

In accordance with the Dutch Regulation for Periodic Evaluation Research (RPE in Dutch), the independent Inspection for Development Cooperation and Policy Evaluation (Inspectie voor Ontwikkelingssamenwerking en Beleidsevaluatie or IOB) has carried out a policy review of Dutch support to the United Nations (UN) in the period 2012-2015. The purpose of the support was to help achieve the goals of Dutch development cooperation in four priority areas: (1) Sexual and reproductive health and human rights, (2) Water, (3) Food security and (4) Security and rule of law. For each of these priority areas IOB commissioned a separate sub-study. The overall objective of the policy review was to evaluate the goals, objectives and expenditure related to allocations to allocations under the Dutch budget for Foreign Trade and Development Cooperation to system organisations and projects/programmes within the UN[9]. Four sub-studies have been done in the four priority areas, of which this study addresses cooperation with the UN, and in particular UNICEF, on domestic water supply, sanitation and hygiene (WASH).

Objectives of the WASH study

The subject of the UN study on WASH is the WASH programme of the United Nations Children's Fund (UNICEF), because the greater part of WASH financing consistently went to this organisation (on average 63% between 2012 and 2015, see Table 4). The objectives of the UNICEF WASH study were (1) to provide insight in the motivation and forms of financing of the cooperation with UNICEF, including the relationship with the Dutch policies and the quality of the monitoring; (2) to assess the effectiveness and efficiency of the activities as reflected in internal and external evaluative reports and (3) to evaluate the contribution of UNICEF WASH to the realisation of the water sector goals and targets of the Netherlands and the (conditions for) efficient and effective WASH financing, planning and implementation by UNICEF.

Approach

A desk study was done of Dutch policies on development cooperation, WASH and the cooperation with UNICEF through case studies of the two largest WASH cooperation programmes in East and Southern Africa and West and Central Africa, involving 15 countries in total, and since end 2014 11 countries, when in three West African countries WASH became the separate Ebola Virus Disease (EVD) programme. The main focus was on field evaluations and related reports, such as mid-term and latest progress reports. Supplementary data and comments were provided by Mr. Evariste Kouassi Komlan, principal advisor water, sanitation and hygiene in UNICEF New York, Mr. Peter Harvey, regional advisor water, sanitation and hygiene for ESARO and Ms. Kelly Ann Naylor, regional advisor water, sanitation and hygiene for WCARO, Mr. Dick van Ginhoven, Sr. Advisor Water and Sanitation of the Directorate General for International Cooperation (DGIS) in the Ministry of Foreign Affairs. In December the author attended a meeting of IGG, UNICEF and Dutch NGOs. The bilateral, multilateral and private sector financing channels were compared using the evaluation study by Rijsdijk and van Apeldoorn (2016), who had used the same analytical framework as this evaluation. (DAC criteria and FIETS sustainability criteria, see *Research framework* below).

A first limitation of the study was the large number of reports, many with data of limited usability. Some reports were hard to find or untraceable. Another was that both the DAC evaluation indicators and the available reports were not specific enough for a more detailed assessment of the roles of NGOs and the private sector. The only means was therefore the comparison of the results of the two case studies with the findings of the 2016 evaluation of WASH programmes financed through the bilateral channel (2), the NGO

[9] Article 5.1: A strengthened framework for development and inclusive growth by enhanced multilateral commitments. Under this article fall the expenditures for the so-called systems organisations: the core funding or regular resources for UNDP and UNICEF; The voluntary contributions to the specialised UN organisations and the earmarked funds (also known as project financing or special funds) of UN programmes and projects have been listed under the following budget articles: Article 1: Sustainable trade and investments; Article 2: Sustainable development, food security and water; Article 3: Social progress; and Article 4: International peace and security.

channel (5) and the private sector channel (2). As this sample was too small and specific a sample to be representative, the findings of the channel comparison are indicative only.

Case studies

Two case studies were carried out to evaluate the multilateral UNICEF channel: the ESARO programme under UNICEF's East and Southern Africa Regional Office and the WCARO programme under UNICEF's West and Central Africa Regional Office (Table 1). The selection criteria for the WCARO programme were: (1) highest contribution (26% of total WASH contribution), (2) largest number of countries (nine), (3) integrated approach to WASH (water, sanitation, hygiene, WASH in schools and clinics and (4) support for hardware, software and organisational aspects as well as adjustments at national level.

Because the WCARO programme is still young (it started on 1 January 2013 and will last till 31 December 2017), this case study is preceded by a case study of the ESARO programme (2006-2014). Selection criteria for ESARO were: (1) a similar regional, multi-country programme (five countries), (2) a similar organisational set-up, with roles for UNICEF's regional and country offices, (3) a more advanced stage of completion - phase I started on 1 September 2006 and phase 2 will end on 31 December 2017, (3) a substantial, be it lower, share of the financial to the UN WASH contribution (9%), and (4) the possibility to assess if, and which, lessons were learned and applied in WCARO. UNICEF made the country selection but where relevant honoured existing cooperation of the Netherlands and national governments, e.g. in Benin.

Table 1 Counties in UNICEF Regional WASH programmes supported by the Netherlands

UNICEF Regional Office	Programme countries	Period
East and Southern Africa Regional Office (ESARO)	Comoros Islands	2006-2013
	Malawi	
	Mozambique	
	Rwanda	2008-2014
	Zambia	
West and Central Africa Regional Office (WCARO)	Benin	2013-2017
	Central African Republic	
	Ghana	
	Ivory Coast	
	Mali	
	Mauritania	
	Guinea	Became the Ebola Virus Disease (EVD) programme in November 2014
	Liberia	
	Sierra Leone	

Analytical framework

The analytical framework of the sub-study was built on the OECD guidance document for Development Effectiveness Reviews, especially Annex 2, "Operational Guidelines for Classifying Evaluation Findings" (OECD-DAC, 2012). This framework, here in an adjusted order, lists six major assessment criteria, each with a number of specific indicators (Table 2). Each indicator has a scale with descriptions of the four scenarios with values ranging from 'highly unsatisfactory' (score 1) and 'unsatisfactory' (score 2) to 'satisfactory' (score 3) and 'highly satisfactory' (score 4). This approach made it possible to use one quantitative scoring model in all four sub-studies. A full set of scales can be found in the IOB umbrella report.

Table 2 Analytical framework for all sub-studies of the IOB

Criteria	Indicators
1. Relevance	1.1 Degree to which needs and priorities of target groups are addressed
	1.2 Degree of alignment with national development goals
2. Effectiveness	2.1. Degree of achievement of objectives esp. outputs and outcomes
	2.2 Degree of realising positive benefits for target groups
	2.3 Nature and relative size of groups who have benefitted
	2.4 Degree of contribution to national development policy and programmes
3. Sustainability	3.1 Degree to which Financial, Institutional, Environmental, Technical and Social (FIETS) criteria are met to sustain the services after programme completion
	3.2 Degree of contribution to strengthening the enabling environment in terms of (1) national policy and programmes, (2) community participation, (3) governance and rule of law, (4) public accountability and (5) supporting structures such as resources and market development
4. Cross-cutting themes	4.1 Degree to which supported activities can contribute to gender equality
	4.2 Degree to which environmental issues are taken into account
5. Efficiency	5.1 Degree to which programmes can be rated credibly as cost/resource-efficient
	5.2 Degree to which stated outputs/outcomes have been achieved in time
	5.3 Degree to which institutional processes and procedures allowed avoiding delays and cost-overruns
6. Application of learning	6.1. Degree to which systematic, regular evaluations are scheduled and carried out
	6.2 Degree to which regular monitoring exists and data is reported and acted on
	6.3 Degree to which Results Based Management is in place and data acted on
	6.4 Degree to which Management Responses to reports are present and indicate specific improvements.

Source: OECD DAC, 2012, Annex 2, adjusted for IOB study

To assess the quality of the reviewed evaluations the following criteria were used (Table 3):

Table 3 Criteria for assessing the technical quality of the evaluations

Requirements	Conditions to be met
1. Proper indicators and methods used to measure results	1.1 SMART indicators: Specific (unambiguous), Measurable (based on accessible data), Appropriate (for evaluation goals), Reliable (measuring what is intended; different people/methods get same results) and Time-bound (period-specific) (HALF)
	1.2 Indicators cover at least two levels within the results chain, e.g. community and local government. (NOT)
2. Transparent and reliable sources, collection and analysis of data	2.1 Detailed and complete description of data process given. (MOSTLY)
	2.2 Enough information available to answer the research questions. (YES)
	2.3 Data process is rigorous, i.e. meets scientific standards. (VARIABLE)
3. Independent from stakeholders	3.1. Researches are not part of, or connected by interests to, the agency/ies being researched. (YES)
4. Attribution possible	4.1 Quantitative study model compares of study and control group with a double difference approach. (NO)
	4.2 Qualitative study model discusses alternative options, explains influence contextual factors and verifies each step of the causal chain. (
5. Conclusions grounded in findings	5.1 Conclusions are clearly presented and follow logically from the findings

Source: IOB

Regarding 'SMART' indicators (point 1), *specificness* was good at country level, but without going beyond the local level to broader (programme) indicators and standards of WASH services. *Measurability* of output, outcome and sustainability data was fine, as all were based on data collected in the field. However, the indicators were not always *appropriate* and complete. On hygiene for example, WCARO reported the number of people that had adopted the promoted practices, but the data refer to estimates of people reached; actual adoption was not measured. *Reliability* was fair, but not consistently so. Especially definitions of a safe latrine

in terms of hygiene, and provisions for proper handwashing (water, soap and a device for producing a water flow) were either missing or had problems of reliability (measurement was subjective) or validity (measurement may mean something different). *Time-specific* was also fine, as all data given were time bound. Data was generally reported at two or three levels (community, district, and programme). Capacities of NGOs and districts were hardly assessed, even though the data showed that community management capacity was a programme weakness.

Regarding the quality of data process (point 2) the reports described the data collection process, but not with a common framework and standards, so that rigor could not always be established. Enough data was available for the analysis and conclusions, although the different country approaches resulted in empty cells when summarizing the data region-wide. All ESARO checks were independently reviewed for quality (Lockwood et al, 2013) a system continued in WCARO (Boulenouar, not dated, c. 2015). The reviewers concluded that the checks were the most comprehensive effort by any donor to monitor sustainability. UNICEF-contracted local auditors were mostly competent and efficient. UNICEF shared the results with national governments, districts and sometimes local NGOs and used them for corrective actions and system improvements, the latter mostly on technology. The reviewers commented on the lack of attention to the sustainability support level and quality problems with indicator definitions, measurement and sometimes sampling.

All researchers were independent (point 3) and there was no evidence of their being led by other interest, such as getting more UNICEF assignments. A limitation for measuring impacts and attribution of results (point 4) was the absence of reporting progress against baseline studies in programme and control villages. Baseline studies had been planned in most countries, but UNICEF reports did not mention implementation and summarise results. Nor were baseline study reports found filed by DGIS. Regarding qualitative data there was a scarcity of data on the involvement of the communities, women and the poor in the water programmes and in sanitation and hygiene after the initial triggering activities. It was further found that the evaluations had no control groups. However, double blind studies would have been virtually impossible anyway, because with modern means of communication control villages can seldom be isolated from large promotion programmes. A rolling approach whereby later to be served villages serve as control would have been more realistic (Sijbesma et al., 2011). Finally, all conclusions were presented clearly and well-grounded in the data (point 5).

Structure of the report

After this introduction Chapter 1 contains an overview of the Dutch WASH policy and the cooperation with UNICEF as a systems organisation and an implementing organization for WASH. Chapter 2 is a descriptive chapter of UNICEF with regard to WASH. It covers the UNICEF WASH policy, expenditures and income, the types and spread of WASH activities and the target groups and how UNICEF is enhancing their WASH access. Finally the chapter addresses the functions of UNICEF as a systems organisation for WASH: a convener/platform for WASH, a supporter of movements for international agreements, norms and standards and, together with WHO, the leading organisation in the monitoring and analysis of the WASH status in all countries and regions of the world and the progress to the achievement of the WASH Sustainable Development Goals (SDG) and earlier the WASH Millennium Development Goals (MDG). Chapter 3 and 4 are the analytical chapters of the cooperation with UNICEF in the two regional programmes. They address the relevance, effectiveness, efficiency and sustainability of the programmes and the degree to which they have strengthened the national enabling environment. Also addressed are equity on gender and the application of learning through evaluation, monitoring and reporting, results-based management and management responses to reports. In Chapter 5 the roles of UNICEF have been analysed: as WASH implementer in the field and system organisation at the global level, the internal evaluation function, global level activities especially on the community approach to sanitation and hygiene, and overall efficiency.

WASH POLICY AND EXPENDITURES OF THE NETHERLANDS

Priority sector

The water sector is one of the four priority sectors chosen by the Dutch government to continue the country's position as one of the global leaders in these sectors (MinBuZa, 2011a, 2012a). Within the water sector there are three content priorities: (1) efficient water management (2) improved watershed management and safe river deltas, and 3) universal and sustained access to safe water and sanitation. This report focuses on point 3, universal and sustained access to safe Water, Sanitation and Hygiene (WASH). The development objective for WASH is to provide a substantial contribution to the globally agreed water and sanitation targets under Millennium Development Goal (MDG) 7c. The (measurable) targets for the period 2012-2015 are that:

- by 2015 25 million more people than in 2010 have access to adequate sanitary facilities and have improved their hygiene practices
- by 2018 25 million more people than in 2010 have access to safe drinking water (MinBuZa, 2014)

The water target was postponed by three years because of a budget cut and a higher priority to sanitation to catch up on arrears. Realising human rights to safe water and safe sanitation is expected to reduce the inequalities of the poor. Also expected are improved health from reduced WASH related morbidity and mortality, especially of children, pregnant women and other vulnerable groups, and benefits for women/girls, e.g. reduced WASH related work giving more time for education. According to the Ministry's annual reports to the Dutch parliament WASH got 50% of funds in 2013, 66% in 2014 and 53% in 2015. The latter two allocations also include funds for the UN[10].

Expenditure and financing channels

From 2012 to 2015 the total expenditure on water (WASH and IWRM combined was EUR 613m. Of this, EUR 347 m or 56 % was for WASH. Figure 1 gives the division of the WASH-expenditures across the financing channels.

Table 1: WASH-expenditures 2012-2015 across financing channels

Financing channel	**Expenditure**	**Percentage**
UN	141,3	41,1%
Other multilateral	11,4	3,3%
Ngo's	52,0	14,8%
Public Private Partnership	56,0	16,1%
Research and Private Sector	48,7	14,1%
Bilateral (Government to Government)	38,1	11,1%
Total	347,4	100%

Contributions from the Netherlands government

The choice of the Netherlands to cooperation with UNICEF reflected that UNICEF is the largest WASH actor within the UN. UNICEF is a systems organization with a WASH programme since 1968, when it met the urgent demand for emergency well drilling during a serious drought in Northern India. UNICEF now has the largest ongoing WASH (107 countries), always in cooperation with the national and local governments.

[10] In 2012 reporting on water funding was not yet split into water management and WASH, see MinBuZa, 2013b.

The Netherlands support UNICEF through two types of contributions: core contribution ('regular resources' in UNICEF terms) and non-core or voluntary contributions ('other resources' in UNICEF terms). From 2012-2015 total core funding for UNICEF amounted to EUR 101 million.

WASH contributions to UNICEF and other UN organizations amounted to EUR 105 million from 2012-2015. During the period under study 11 WASH programmes were supported
Budget holder for the regional and global programmes is the Directorate for the Environment, Water, Climate and Energy (DME). For the country programmes this is the Netherlands embassy. Two countries, Ghana and Mozambique, fell in both categories. In East Africa, Ethiopia and Kenya were not taken up in the regional programme, but continued as country programmes.

Table 2 UNICEF WASH supported by The Netherlands, by location, budget holder, duration and amount in million EUR

UNICEF WASH programmes	Budget holder	Start date	End date	NL Investments	%
1. WCA Regional	DME	1-jan-13	31-dec-18	57,74	55%
2. Ethiopia	RNE	1-aug-11	30-jun-16	11,62	11%
3. ESA Region Phase 1 & 2	DME	1-sep-06	31-dec-17	11.83	11%
4. Kenya	RNE	1-dec-07	31-dec-16	7,79	7%
5. Ghana	RNE	1-dec-14	31-dec-19	2,31	2%
6. Yemen	RNE	1-nov-12	30-okt-15	4,38	4%
7. Bangladesh	RNE	1-jul-12	31-dec-17	5,25	4%
8. Mozambique	DME	1-nov-11	31-dec-17	2,55	2%
11. Worldwide other	DME	1-okt-11	31-dec-16	2,30	2%
TOTAL FINANCIAL SUPPORT 2012 - 2015				105,79	100%

Based on DGIS monitoring system for water sub-sector (Speerpunt Water) PS=private sector 1) Suspended due to political crisis

A third Dutch source of financing for UNICEF comes from contributions through UNICEF Nederland, the non-governmental Netherlands UNICEF Committee. The total private contribution in 2012-2015 was EUR 257m. In the last two years they dropped from over EUR 70m/year to EUR 65,6 in 2014 and EUR 50,2m in 2015 (UNICEF Comité Nederland, 2012, 2013, 2014, 2015. Position-wise the Dutch private contribution was the 5th largest in 2013 (MinBuZa, 2015a).

Comparative advantages
Dutch policy documents gave several comparative advantages of cooperation with UNICEF in general: (1) UN organizations like UNICEF create the platforms for international agreements, norms and standards, on which they can then address individual countries (MinBuZa, 2011a); (2) UNICEF's functions and activities have a high synergy with Dutch development policy as laid down in the 2013 document "Wat de wereld verdient" and (3) the cooperation builds on existing relationships and allows roles for Dutch experts, research institutes, social organizations and businesses and secondment to UNICEF offices in strategic countries (Policy letter on water, 2012). Savings on administrative load and so cost at head office and in the embassies may also play a role, although this is not explicitly mentioned.

Specific advantages mentioned for cooperation in WASH are (1) UNICEF's world-wide presence and strong operational capacity in WASH, (2) a long-time lead position in WASH with lasting country commitments that allow development of capacity and sustainability, (3) the effectiveness of the water programme, (4) stimulation of new developments, (5) an important role in addressing equity on gender and for the disadvantaged cross-cuttingly, (6) improved understanding and policy on ecological sustainability and (7)

potential and growing actions to link with other UN agencies and other related sectors (MinBuZa BEMO nr. 26501 and 26474, MinBuZa, 2012b, c, MinBuZa, 2013a, 2015a).

UNICEF AND WASH

UNICEF WASH policy

UNICEF's policy is to work for the rights of every child from birth to adulthood (18 years). The rights of children include pre-natal care, safe birth, adequate nutrition, clean water, sanitation and hygiene (WASH), and equitable education, health care and access to shelter, protection from violence, conflict and disaster[11]. In 2015 UNICEF worked in 192 of the 193 UN member countries. Strategy-wise UNICEF WASH continued to focus on increasing access, but with a greater focus on universal use of safe water in the most disadvantaged locations and groups, e.g. those with physical disabilities. Other refocusing was on communities to become open defecation free (ODF) with everyone having and using at least a basic latrine built with their own resources; increased handwashing with water and soap or ash and other good hygiene practices; and WASH facilities in schools (separate for girls and boys) and in health centres (UNICEF, 2013c, 2014a, 2015c, 2015d).

UNICEF's strategic plan (2015d) also presented quantitative targets for promoting a WASH enabling environment: (1) building national WASH capacity, (2) implementing a national ODF strategy for sanitation, (3) establishing national drinking water targets for unserved populations and (4) separate school latrines for girls and (5) implementing water safety plans to ensure that water from safe sources remains safe during collection, home storage and drawing. Globally, UNICEF WASH cooperated with 100+ countries in 2012-2013 and 107 countries in 2014-2015 (UNICEF, 2013c, 2014a and 2015c).

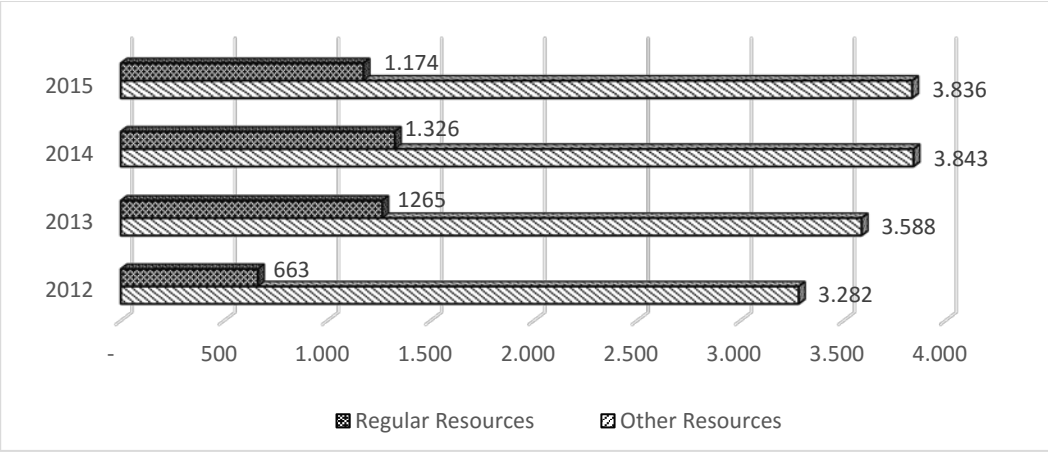
Regular resources and WASH resources

As mentioned above UNICEF's financial resources are made up of regular resources (RR) and other resources (OR). The latter are sub-divided into 'other resources regular' for field programmes and 'other resources emergency' for emergency programmes. Regular resources come from voluntary contributions of all UN members, private contributions to UNICEF, mostly through UNICEF national committees at country level, and from a standard 7% levied on all donor-supported implementation programmes (earmarked funds). They are non-earmarked and finance the continuity of the country programmes and the organisational costs.

The total income of UNICEF in 2012-2014 was US$ 18.977m. Regular resources or core funds amounted to US$ 4,406m, or 23%. The Netherlands contributed US$ 86,5m or 2%. Annual contributions ranged from US$ 44,5m (highest) in 2013 to US$ 21,3m (lowest) in 2015 (UNICEF, Reports on regular resources 2012, 2013, 2014 and 2015). Other contributions, mostly for earmarked programmes, amounted to US$ 14.571m (77%). The annual division between RR and OR is shown in Figure 5.

Figure 1 Division of regular and other resources of UNICEF, 2012-2014

[11] http://www.unicef.org/about/



Source: UNICEF Reports on regular resources, 2012-2015

UNICEF WASH resources can be seen in Table 6. From 2012 to 2015 they amounted to US$ 2.446m or 13% of all UNICEF resources. Six per cent of this was for emergencies and 7% for regular WASH programmes.

Table 4 Global resources for UNICEF WASH, 2012-2015 in US$m

Year	Total WASH	Regular resources	Other resources	Emergencies
2012	380	57	176	146
2013	470	47	211	212
2014	727	101	276	350
2015	869	110	323	436
Total	2.446	315	986	1.144

The position of the Netherlands as donor for UNICEF donor and UNICEF WASH is given in Table 7 below. The overall position (8th, 7th, 9th and 9th) was relatively stable. For WASH the position fluctuated much more: 2nd in 2012 and 2013, 4th in 2014 and 8th in 2015.

Table 5 Top ten donors for UNICEF and UNICEF WASH, 2012-2015

	2012		2013		2014		2015	
No.	Overall	WASH	Overall	WASH	Overall	WASH	Overall[2]	WASH[3]
1	UK	UK	UK	UK	USA	UK	USA	UK
2	USA	**Netherlands**	EC	**Netherlands**	UK	USA	UK	Sweden
3	Norway	EC+ECHO	USA	EC+ECHO	EC	UNOCHA	EC	Canada
4	EC	USA	Japan	USA	Norway	**Netherlands**	Germany	US fund
5	Japan	Japan	Norway	Japan	Germany	Japan	Sweden	MDTF
6	Canada	Australia	Sweden	Australia	Sweden	EC/Hum Aid	Norway	UK fund
7	Sweden	Canada	**Netherlands**	Germany	Canada	EC	Japan	Norway
8	**Netherlands**	Norway	Canada	Kuwait	Japan	Australia	Canada	**Netherlands**
9	Australia	Sweden	Germany	Canada	**Netherlands**	MDTF	**Netherlands**	Switzerland
10	Germany	US Nat. C'tee	Denmark	Sweden	Australia	Kuwait	Denmark	Australia

MDTF= Multi Donor Trust Fund UNDP. Sources: UNICEF Annual Reports 2012-2015; 2012 and 2013 WASH Annual Reports, 2014 and 2015 WASH Annual Results Reports.

Expenditure

In 2015, 74% of the regular resources or core funding of US$ 1.114m went to direct programme expenses and 26% to cover organisational costs. Most of the direct programme funds (88%) were for the activities of the country and regional offices with national governments. Five percent each went to innovations and

advocacy and 2% to UNICEF's emergency programme. Less than 1% was for adjustments. Resources for the organisation were divided between supporting programme effectiveness (53%), management (39%), UN cooperation (3%) and special purposes (3%) (UNICEF, 2016b). There was no definition and specification of overhead costs. Expenditures for WASH constituted 18% of the expenditure for all thematic programmes. Over 2/3rd of the development expenditure was in Eastern and Southern Africa (ESA region) and West and Central Africa (WCA region) (UNICEF, 2015b).

Types of activities

UNICEF also initiated the Sanitation and Water for All initiative together with the Netherlands and the UK and runs its secretariat. In humanitarian aid it is the global coordinator of the cluster on water and sanitation and has large country and regional WASH programmes in areas with least WASH access, 11 of which are also Dutch focus countries (MinBuZa, 2011a, 2011b, MinBuZa, 2013b and 2015b, see also Table 5).

The strategic plan also presented quantitative targets to help countries create a WASH enabling environment: (1) building national WASH capacity, (2) implementing a national ODF strategy for sanitation, (3) establishing national drinking water targets for unserved populations and (4) separate school latrines for girls and (5) implementing water safety plans to ensure that water from safe sources remains safe during collection, home storage and drawing (UNICEF Strategic Plan, 2015).

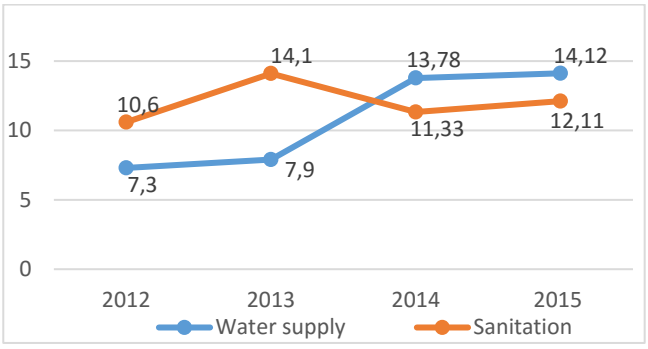
Specific water activities are lower-cost manual drilling of hand pump wells, rural and urban piped services for a higher basic service level, PPP models for sustainable water services, and mobile-to-web mapping of functionality. In sanitation UNICEF focuses on moving towards district and city-wide ODF. Development of sanitation marketing to sustain ODF and climb the sanitation ladder has increased in importance. For hygiene UNICEF continues activities to enable and promote handwashing with soap or equivalents at critical times. WASH in schools and clinics continues and now comprises a ***approach: besides facilities in schools also activities for menstrual hygiene management and improved health and education outcomes.

Outcomes

In the period under study and according to UNICEF reports, a total of 48.14 million people gained access to sanitation and 43.1 million people to improved water supply.

Figure 6 shows the progress across the years.

Figure 2 Total number of people (in millions) achieving WASH access, UNICEF development programme, 2012-2015

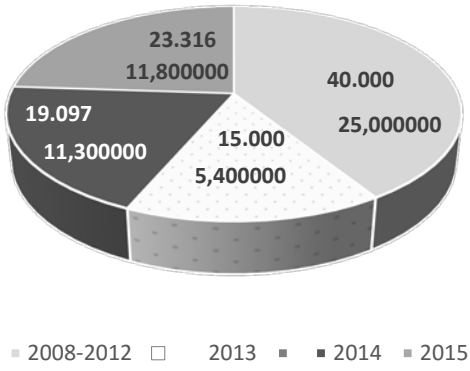


Source: UNICEF WASH annual reports 2012, 2013, 2014 and WASH annual results report, 2015

Sanitation outcomes (53%) were better than water supply (47%) reflecting efforts of UNICEF with the national and local governments to close the sanitation gap. The higher sanitation outcomes in 2012 and 2013 were not sustained in the next two years for unreported reasons.

Since UNICEF introduced the ODF village approach with local and national governments in 2008, some 97.413 villages have been declared ODF, with an estimated total population of 54 million women, children and men. After the first five programme years, an estimated 25m people were living in 40,000 villages declared ODF. Since 2013 progress began to scale up (Figure 7) (UNICEF, 2012, 2015b, 2016a).

Figure 3 No. of villages in UNICEF cooperation programmes declared ODF, with estimated total populations



Functions as a system organisation

At the global level UNICEF had a leading role in WASH agenda setting. It had an important role in formulating the WASH component of the Agenda for Sustainable Development and the 2030 Sustainable Development Goal for WASH, SDG6, "Ensure availability and sustainable management of water and sanitation for all". This has helped shift the WASH development norms to universal and sustained access to safe water including for all marginalized rural and urban areas and groups and to sanitation behaviour change (freedom from open defecation) and hygiene[12]. Together with the WHO UNICEF also monitored the progress to the 2015 Millennium Goals for WASH and now the SDG6 targets, and is the co-publisher of the authoritative annual Joint Monitoring Programme Reports (WHO and UNICEF, 2012, 2013, 2014, 2015).

As UN agency with a global mandate for WASH UNICEF is also a well-known convener of global and regional meetings for WASH agreements. An example is the regional meeting on innovative WASH financing with 25 West and Central African countries and a wide range of regional and global actors, as additional financing for SDG6 is expected to come increasingly from domestic resources, including private sector investments (UNICEF, 2016a). An example of standard setting is the global advocacy and guidance (with programmes) for WASH in schools, with water, sanitation and handwashing facilities, realistic student/facility ratios, and separate girls' toilets with menstrual hygiene provisions (UNICEF 2009 and not dated).

[12] WASH-related targets of MDG6: By 2030, (1) achieve universal and equitable access to safe and affordable drinking water for all; (2) 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; (3) improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally; (4) substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity; and (a) expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies and (b) Support and strengthen the participation of local communities in improving water and sanitation management (https://sustainabledevelopment.un.org/sdg6).

CASE 1: ESARO PROGRAMME

The overall targets of the programme were 3,06 million new water users and 3,31 million new people with basic sanitation (Table 8). The targets for WASH in schools and health centres are in Table 12 below. The total Dutch fund allocation was USD 94,4 million (93.3 when corrected for currency fluctuation). Water supply implementation was led by national (district) staff and took the largest share of funds (72%) Contractual services of NGOs (software), private companies (well drilling) and local consultants (sustainability research) amounted to USD 4.7 million or 9% of Batch 1 (Total USD 54 million). How much was indirect (overhead) cost was not clear. Malawi and Zambia (Batch 2) still had 11 months left; no financial breakdown was yet available.

The regional office got 2% of the funding, and not the standard 3%, because batch 2 had no regional component; 79% was for staff and personnel, 13% travel and 7% operating costs (UNICEF, 2014b). UNICEF headquarters got the standard 7% of the allocation, for indirect costs. UNICEF and national governments contributed US$ 30.8m and US$ 20.7m respectively. Except for Malawi these amounts do not include community contributions. Proportionally the division was the Netherlands 64%, UNICEF 21% and national governments 14%. Other donors did not contribute, but have taken up support to individual country programmes, especially for sanitation (see under Partnerships below).

Table 6 Targets for improved water supply, sanitation and hygiene promotion in 5 supported ESARO countries

Country	Geographic targets	Water infrastructure		Served with safe water		Sanitation & Hygiene Promotion	
		New	Rehab	New	Rehab	People served	
Comoros	108 villages	Not specified	n.a.	360.000	n.a.	360.000	360.000
Malawi	12/28 dist.	2.800	1.010	700.000	240.000	1 million	1 million
M'bique	18/128 distr	2.000	400	1 million	200.000	1 million	1.2 million
Rwanda	4/30 distr	39 [1)]	n.a.	400.000	100.000	450.000	400.000
Zambia	20/65 districts	2.400	480	600.000	120.000	500.000	500.000
TOTAL		7.239	1.890	3,06 mill	660.000	3,31 mil	4,26 mil

[1)] Including multi-village piped schemes. In Zambia some districts were split, so that the total became 25.

RELEVANCE

Needs

Table 9 gives the national rural WASH statistics for 2012 (WHO and UNICEF, 2015) and the rankings on the Human Development Index out of 188 listed countries in 2010 (UNDP, 2015). All countries scored low on especially sanitation and low to intermediate on socio-economic development. No specific data was given for the selected districts, but the 20 (later 25) in Zambia were all remote border districts. Local situations at start were not reported. A baseline study on the situation in the chosen districts was only reported for Mozambique and Rwanda.

Table 7 Need indicators: improved rural water supply, sanitation and incidence of open defecation by country in 2012

Country	Access improved rural water supply	Access improved sanitation (rural)	Estimated rural OD	Country ranking on HDI (Highest 1 - Lowest 188)
Comoros	97%	30%	1%	159
Malawi	80%	51%	10%	173
M'bique	29%	5%	58%	188
Rwanda	63%	56%	3%	163
Zambia	46%	43%	27%	139

Source: UNICEF/WHO, 2015, data for 2010; UNDP, 2016 and HDI Index 2010

Alignment

UNICEF's strategy for WASH is to have joint programmes with the national governments Water supplies were mainly implemented by district staff under guidance of UNICEF country offices. For the water supply implementation UNICEF used 72% of the funds. Drilling of deep boreholes was done by private sector companies. For sanitation promotion UNICEF contracted (inter) national NGOs. Sustainability checks were done by local consulting companies. The total share of the funds that went to the NGOs and private contractors was about 9% (Batch 1 only, as Batch 2 had still one year left at the time) (UNICEF-ESARO, 2014b).

EFFECTIVENESS

Outputs and outcomes

Water supply. At the end of the programme 99% of the construction targets were met for users of new water supplies and 173% for users of rehabilitated systems (Table 10). They showed different degrees of progress:

- In the Comoros water outputs and outcomes were highly unsatisfactory. The islands focused more on WASH in schools, where results were satisfactory (see under schools in Table 11 below).
- Malawi surpassed both output and outcome targets. The service level (average number of users per improved point) was 250, or half the maximum standard of 500, allowing population growth;
- Mozambique sustained its good results in water and sanitation since the IOB sector evaluation which included UNICEF Mozambique (IOB, 2012). The output was satisfactory with 84% and 100% of the construction targets met one year before the end date. Outcome was already highly satisfactory after innovatively adding a piped network to some boreholes. The service level of 678 was consistent with 700 in the independent end review. This was still above-standard, but had come down from 800-900 at the 2010 mid-term review, after UNICEF drilled extra wells in the densest populated areas (Drift, 2014). To cater for population growth more wells or linkage with mini-nets are still needed.
- Rwanda was highly satisfactory for outputs and surpassed the outcome target. By how many taps, and whether the average user number per tap is within the standard service level was not reported.
- Zambia was highly satisfactory for output and outcome and the average of 250 users/pumps was well within the service standard, with space for population growth; however the independent auditor reported that the high rehabilitation score was due to repairs rather than complete overhaul and that this may reduce the total life expectancy (Anscombe, 2012).

Table 8 Achievement of water targets in 5 supported ESARO countries: status at end 2015

Country	Yr.	Infrastructure: planned		Infrastructure: actual		% completed		No. of people served: planned		No. of people served: actual		% served	
		New	Rehab	New	Rehab	New	Rehab	New	Rehab	New	Rehab	New	Rehab
Comoros	'12	108	n.a.	3	n.a.	3%	n.a.	360.000	n.a.	14.400	n.a.	4%	n.a.
Malawi	'12	2.800	1.010	3.241	2.042	**116%**	**202%**	700.000	240.000	799.699	510. 400	**114%**	**213%**
M'que	'13	2.000	400	1.689	400	84%	**100%**	1 mil	200.000	1.080.600	57.500	**108%**	29%
Rwanda	'16	35/29 [1)]	n.a.	35/29	n.a.	**100%**	n.a.	400.000	100.000	417.352	98.625	**104%**	**99%**
Zambia	'15	2.400	480	2.300	826	**104%**	**172%**	600.000	120.000	915.431		**127%**	
TOTAL		7.372	1.890	7.297	3,268	**99%**	**173%**	3.720.000		3.894.007		**105%**	

[1]) Piped and boreholes. Sources: country reports, sustainability checks and independent evaluation (Mozambique, van der Drift, 2014)

Sanitation and Hygiene. Regional data showed that at the end of 2013 the percentages of people estimated to have been reached by sanitation and hygiene promotion campaigns were 89% and 87% respectively (UNICEF-ESARO, 2014a). Updates will still come from the remaining 11 months in Rwanda and Zambia. Table 11 shows slightly earlier country data and their aggregation, so higher end results can still be expected. The 77% total hygiene outreach is also underrepresented because data for the Zambian districts were lacking.

The primary sanitation objective was the elimination of open defecation. In Rwanda this was already rare (4%, Synovate, 2012). Here, the objective was more durable sanitary latrines (Ipsos, 2013). Generally, the outcomes met or surpassed the OECD standard (in bold in Table 11). The reported behaviour changes cannot be totally attributed to the programme, however, since most countries did not collect baseline data on ODF

villages and latrine coverage at its start. Also attribution measurement would have been more rigorous by comparison programme villages with control villages, but as pointed out earlier, this would have been almost impossible, because with modern means of communication it is almost impossible to isolate control village from large promotion programmes.

Table 9 Outputs and outcomes sanitation and hygiene in the 5 assisted ESARO countries

Country	No's targeted to be reached by promotion		Actual numbers and % reported reached		Behaviour changes (from UNICEF reports and sample studies)		
	Sanitation	Hygiene	Sanitation	Hygiene	Certified ODF village	ODF (HHs)	HWWS (HHs)
Comoros	360.000	360.000	See school programme		No data		
Malawi	1.000.000	1.000.000	964.215 (**96%**)	916.453 (**92%**)	1132 out of 1933 (59%)	79%	41%/39%/11%
M'bique	1.000.000	1.200.000	>1.200.000(>**100%**)		307	**94%**	48%/45%/39%
Rwanda	500.00	500.000	500.000 (100%)	560.000 (**140%**)	no data	**88%**	37%/nd/nd
Zambia	500.000 [1)]	500.000	225.000 (45%) [2)]	500.000	827 / no data	**83%**	39%/nd/nd
TOTAL	3.360.000	3.560.000	2.889.215	3.176.453			
% met			**86%**	**89%**			

[1)] 100.000 HHs [2)] with DFID funding 942.630 people or 189% ODF= open defecation free HWWS= observed handwashing facility, with water/wet, and with soap/ash. HH=households. Data Malawi for certified ODF villages.
Sources: Anscombe, 2012, 2013, Ipsos, 2013, Weconsult, 2013, UNICEF-Comoros, 2012, UNICEF-Rwanda, 2016, UNICEF-Zambia, 2016.

UNICEF adopted Community Approaches to Total Sanitation (CATS) as its strategy in 2008 (UNICEF, 2014a). Different varieties exist, of which CLTS (Community-Led Total Sanitation)[13] is the best known ground form. Reasons for adopting CATS were that subsidized latrines were costly because they had to be permanent, yet were often not used and maintained, because their installation was government or donor driven and not demand-based. Under CATS households no longer got donor or state subsidies for sanitation. Instead the campaigns use participatory methods to stimulate people to stop open defecation and use their own means to build temporary basic household toilets. They are then encouraged 'to climb the sanitation ladder' by upgrading their latrines to (or replace them by) more durable (permanent) models. External funds go training and outreach campaigns, which is far less costly than infrastructure. Long-term success depends on households building a new latrine when the old one gets filled or collapses and local enterprises that can market, build and provide credit for affordable permanent models as well as sanitary pit emptying and sludge disposal services. The latter has not yet been established: emphasis is on self-build and replaced basic latrines from free or very low cost local materials.

The (estimated) number of persons reached was highly satisfactory (Table 11). Zambia had no hygiene outreach data because promotion was country-wide, using mainly national media, hence the target number was taken as output. Outcome measurement in samples was sometimes as ODF villages and households with latrines, and sometimes only as the latter. This lack of uniformity stems partly from the fact that at the time of some proposals CLTS had not yet been chosen as sanitation strategy and so ODF villages were not targeted. The lack of measurability was compounded by the lack of baseline data and by delays in ODF certification and the use of a purposive toilet sample (10 HHs/village) in Malawi (Anscombe, 2013). Hence there are no clear, unambiguous data region-wide on number of villages served and numbers certified as ODF. The quality of measurement of ODF status was good in three countries (cross check by 2 or more observation methods):

- In Malawi three methods were used in certified and non-certified ODF villages (75% and 25% of the sample), showing 71% certified villages and 66% non-certified were ODF (Anscombe, 2013)
- In Mozambique ODF was evaluated by 3 different method in 10% of certified villages. Some 90% of households still had toilets up to 4 years after becoming ODF (Weconsult, 2013). The data supplements the findings of IOB and UNICEF's central evaluation unit (IOB, 2012) that CATS was promising, but too young to know if results were sustainable (IOB, 2012).

[13] CLTS uses village-wide participatory techniques and tools to encourage HHs to build latrines with their own means.

- In Rwanda, 93% of households had toilets and 6% shared with a neighbour. Estimated ODF was less than 3%. This was consistent with villager observations, who reported 'some OD' in 10% and 'many cases' in 5% of their villages (Ipsos, 2013).

At the household level the rigor of measuring hygiene outcome indicators has not been consistent. Because of unfiled questionnaires it could not be checked how toilet hygiene was measured. Scoring a toilet as not 'clean' (Anscombe, 2012, 2013; Ipsos, 2013) is invalid if latrines are soiled by other substances than fecal matter, e.g. mud, which is no health risk. In addition, what is 'clean' to observer may be unclean to observer B, causing problems of reliability of the findings. The observed presence of water and soap/ash was also not reported consistently (Table 11). This impedes an overall score on hygiene outcomes.

WASH in schools and health centres. The most recent data from the regional report in the DGIS data base gave very satisfactory results already before the end of the programme: the 100% target surpassed by 19% for the number of schools with new facilities and 96% for the number of benefitting pupils (not split up for girls and boys). Table 12 gives the effectiveness per country programme of the schools programme. Comoros and Malawi had *highly satisfactory* results for water and sanitation, and Rwanda for water. Mozambique and Zambia scored *satisfactory* on both. Where school sanitation lagged behind this was mainly due to cost increases that had not been budgeted for.

Table 10 Implementation results for WASH in schools in the five programme countries

Country	Year	Planned		Actual			% actual vs. planned	
		Schools	No. of students	Type of output	Schools	No. of students	Schools	No. of students
Comoros	2012	15	10.230	W&S	15	10.230	**100%**	**100%**
Malawi	2012	300	180.000	W&S [1])	286	171.600	**95%**	**95%**
M'que	2013	400	140.000	W&S	287	100.450	72%	72%
Rwanda	2016	200	250.000	Piped WS	121	151.250	**113%**	**190%**
				RWHT[2])	258	322.500		
				San with HW [2])	203	250.000	**102%**	**110%**
Zambia	2016	500	360.000	Water	613	396.729	**123%**	
				San & HW	445	197.674	**89%**	55%
TOTAL			760.230	Water	1580	1.152.759	**112%**	**152%**
			720.230	San	1236	729.954	**87%**	**101%**

RWHT= Rainwater Harvesting Tanks [1]) in 15 districts, not 12 districts supported by the Netherlands. No actuals: each school is taken to have 600 pupils No breakdown boys/girls [2]) incl. under construction for completion by 31.12.12. [3]) Data from end 2012, no end data.
Sources: ESARO, 2013; UNICEF Malawi, 2012; Drift, 2014; UNICEF Rwanda, 2012; UNICEF Zambia, 2013 (2009-2012), 2016.

In addition in Rwanda, the sustainability checks found that due to a design problem (high elevation) rainwater tanks had not been the proper technology choice, as they did not provide water in the three driest months (Ipsos, 2013 and Synovate, 2012). All programmes provide separate toilet blocks for girls and boys. Total numbers of children served are likely to be even higher, as the programme did not record the actual number of boys and girls in each school. The down side is that with more students, the student/toilet ratios may surpass the national standards that are set to reduce overuse, soiling risks, degradation and non-use, but this has not been monitored. Effective outputs were lowest for local health centres: with a target of 392, 180 or 46% were built so far. One explaining factor is that construction costs more than twice the estimate (see section on efficiency). At the end of the Zambian programme 196 out of 240 rural clinics, markets etc. or 82% had got water, which fell within the OECD margin of a satisfactory result (UNICEF Zambia, 2016).

BENEFITS

Size and type of benefits

The size of the beneficiary groups is substantial. Over 4 million new people (108% of the target) were served by new water supplies or by rehabilitating no longer working systems, as part of the national programmes,

which in OECD terms is more than highly satisfactory. Sanitation promotion, with 3,2 million out of 3,31 million people reached, or 86%, through a now nationally adopted CLTS approach, and hygiene promotion, with 3,2 million out of 3,65 million people reached, almost 90%, also scored highly satisfactory (Table 11). How many of those reached use and internalise the new practices has yet to be established with more rigorous evaluation standards than the current ones.

Little evidence was given of other programme benefits. Investigated most was the walking distance. Mozambique reduced its national standard from 500 to 300 meters in 2013: 43% of all sampled boreholes met this requirement in 2013 and 37% in 2014. Within 500m this was 67% (Weconsult, 2013, 2015). In Rwanda, distance within 500m increased from 83% in 2013 to 85% in 2014 (Ipsos, 2013, 2015). This is very similar to 85% average in the programme districts reported by UNICEF (2016). In Zambia 82% of the boreholes met the standard. In most other cases initial drillers who did not have the optimal equipment had failed to strike water closer by. When the SC noted this, UNICEF Zambia tightened its drilling contracts.

Rwandan households interviewed in 2013 mentioned eight benefits: better sanitation and hygiene practices (48%), time gains (44%), better knowledge (41%), less disease (39%) and more girls and boys in school (38% for girls, 33% for boys), attending classes more regularly (33% for both), using safe water and having more water for hygiene and livelihoods, such as livestock (2% each). UNICEF Rwanda also reported that access to improved water supplies in the project areas had increased from an average 47% in the baseline study to 86% at the end of the programme (the target was 95%). The mortality figures for children under five had dropped by 20%, which was 5% more than aimed for (UNICEF Rwanda, 2016).

Positive benefits also stemmed from participation and training: increased capacity of women and men to manage their own development and improved equality on gender and for the poor. Outcomes on Institutional capacity and gender equality are given in Table 23 below. On equality for the poor no reliable data was found.

More rigorous quasi-experimental studies are needed to measure wider development benefits with confidence. Measuring water quality and quantity benefits was also done too simplistically, because (i) water from a safe source gets often polluted in the homes (Hence home water treatment was added in WCARO) and (ii) water amounts used for improved hygiene must include water collected from unimproved sources as well as water used at source, and (ii) also consider seasonal variation. If such impact measurement is desired, university research studies need to be incorporated in the programme design. However, it is doubtful if such studies can be realistically done as with the current means of communication it is hard to carry out interventions in programme areas and isolate control areas from the promotional efforts in the same zones. Including small periodic studies as part of a cyclic approach is then more realistic (Sijbesma et al, 2011).

Benefits of most vulnerable groups

UNICEF Malawi (2013) gave 6 of the 12 districts as among the poorest, but without supportive evidence. Programme objectives in Rwanda and Zambia were to serve especially the poor, and improve monitoring and mapping to identify and effectively reach them (UNICEF-Rwanda, 2008, UNICEF-Zambia, 2008). No reporting was found for these objectives. Some information on the characteristics of benefitting groups was found:

- In Rwanda vulnerable households got free water from water kiosks at the piped schemes managed by the national water agency. The districts pay their bills (Syndicate, 2012). The SCs included questions on access of the most vulnerable to promotion activities and committees (data under participation below)
- In Mozambique water committees often exempted the poorest households from payment (Drift, 2014)
- In Rubavu district in Rwanda, a latrine for disabled girls and boys was provided in the school latrine blocks for girls and boys respectively on local initiative, the only such case reported (Ipsos, 2013).

- The programme in Zambia also included HIV/AIDS sensitisation in over 475 communities and for all drilling crews (Anscombe, 2012). This followed the national policy, which also includes sensitisation in the national school hygiene programme established with UNICEF support (pers. experience of author)
- On the other hand, the planned 270 squatting plates and handwashing facilities for vulnerable households in Zambia were deleted with the introduction of CLTS, because CLTS excludes subsidies.
- UNICEF Zambia helped develop manual drilling in locations that drilling rigs cannot reach.

SUSTAINABILITY

In four countries sustainability data were collected annually or regularly by independent consultants from the country itself or a neighbouring country. They drew random samples of water supplies, CLTS certified villages (in Malawi also non-certified because of slow certification), schools and clinics) (Table 13). Sample sizes and sampling procedures were not reported consistently so no summary could be included. Structured observations were by technically qualified and trained observers, but specifics such as training were only reported by Ipsos, 2013, 2015 and WeConsult, 2013, 2015. Randomly or purposively selected households were interviewed on practices, supplemented by observations. District staff was interviewed by focus group discussion.

Table 11 Samples of facilities, villages, institutions and households for sustainability checks in 4 ESARO countries

Country	% water points	% villages (sanitation)	% schools	% health centres	% HH (water)	% HH /village (sanitation)
Malawi	9% new, 25% rehab	4%/1.7% [1)]	33%	n a	7%	
M'bique	10%-5%	9%-33%	not specified	not specified	10%	10%
Rwanda	100% (piped) 48% (BH)	100%	100%	100%	2%	2%
Zambia	12% new, 15% rehab	4.2%	24% of sampled WP	5% of sampled WP	30%	

1) Triggered & verified ODF since 2011. Sources: Anscombe, 2012, 2013, DHV, 2012, Ipsos, 2013, 2015, Weconsult, 2013, 2015

The available reports were reviewed on technical, financial, institutional, social and environmental sustainability indicators (also known as 'FIETS'). Findings are reported in the sections below.

Financial sustainability.

Table 14 contains an overview of financial sustainability. Because no core indicators were agreed on in advance, an inductive method was used to identify a set of common indicators from the individual evaluations. Criteria were the regular collection of affordable payment from all user households that feed into an earmarked maintenance fund; that the fees can at least cover the operation, maintenance and common repair costs, that simple records exist and are kept well and that the managers account for the adequacy and use of the funds to both women and men in the user households. In Mozambique, where service sustainability was evaluated since 2008, data showed a decline over time, from very satisfactorily in OECD terms on five of the six indicators in 2013 to two of the six in 2015. Unfortunately the data was not linked to system age (Table 14).

Rwanda adopted a combined public-private-community partnership system. Commercial service operators sell water per 20 l. jerry cans at water point kiosks. The price depends on service costs: gravity supply is cheapest, diesel pumped the most expensive. 8%-20% of sales go to a joint maintenance and repair fund with the district administration to pay for expensive repair jobs (> US$ 700). Minor jobs must be done by the operators. The operators are also accountable to village water committees trained to note and report problems early, but this accountability was not evaluated. In 2014 all 35 piped services and 14 of the 29 borehole services, or 48%) had been handed over after training and were evaluated for the first time. Most villages (82%) could cover the cost of minor jobs and all districts could finance larger repairs, but this may reflect that the systems were new. The one of four districts with 100% score on fee collection and management the Water Point Managers had a daily financial management system, the others were not daily.

Table 12 Financial sustainability for water supply at community level in sample locations

Country	WPC has O&M fund	Regular HH fee collection	Records up to standard	WPC bank account/ secure place	Tariff/Cost coverage	Accountability to fee payers
Malawi	79% to 24%	17%	No data	13%?	$2.5-$12.5[1)]	No data
M'bique	**97% →88%**	**97%**→66 %	72%→60%	**75%**→68%	**84%** cover costs→68%	No data
Rwanda	**91%**	Pay at WP	**86%**	not applicable	**82%, 100%**	No data
Zambia	26% [2)]/40%	No data	No data	No data	No data	6% [3)]/ no data

[1)] Enough for a simple repair [2)]Out of a range of 59% to 89% committees found formed in the 8 sampled programme districts [3)] Formulated as "showing good management skills", an ambiguous definition. Perhaps objective criteria are given in the questionnaire, but no annexes were found on file. *Sources: Anscombe, 2013; Weconsult, 2013, 2015; Synovate, 2012, Ipsos, 2013, 2015; Anscombe, 2012.*

In Malawi and Zambia villages had to pay a commitment fund before construction (down payment for maintenance). In Malawi this was equal to US$ 45. The payments did not increase sense of ownership: In Malawi all repairs, including 28% simple ones, were made and financed by the districts, 20% for the second time and 2% for the third. In Zambia the money went to the District Council, but not all had started to use it for village support (Table 15). Overall financial sustainability was thus unsatisfactory.

Table 13 Financial sustainability for water supply at district level: community contributions in Zambia

Eastern and Southern districts		
Community commitment fee paid	43%	Petauke, Mazabuka and Kazangula districts collect the fees. Nyimba has granted "loans" and one IWP was locked due to non-payment. Katete does not collect fees.
Receipt issued to community	94%	
Funds utilized by Council	50%	All eastern districts apply funds to buy spares etc.
Funds intact and banked	50%	All southern districts claim funds intact
Copperbelt		
Commitment fee paid partly or fully	5%	Ward Councillors are often cited as those informing the communities not to pay.
Receipt issued to community	100%	

Source: Anscombe, 2012: Table 2.5

Institutional sustainability at community level

Different indicators have been used to measure this variable. Table 16 gives a summary and the main findings. In Mozambique villages also have a technical committee: 78% of them knew their roles and 73% had been trained. In Rwanda the transfer of water services to private companies minimized the role of the water point committees to reporting. The companies only dealt with the water point managers (Ipsos, 2015). Zambia trained the committees of 33% of the improved water points, including refresher training for 826 committees, but gave no sex-specific data on who benefitted.

Table 14 Institutional sustainability of new and rehabilitated water supply at community level in sample locations

Country	WPC present		Fully trained		Has all tools		Has spares		Roles clear /done		Proactive	
	New	Rehab	New	Rehab	New	Rehab	New	Rehab	New	Rehab	New	Rehab
Malawi	**98%**	**100%**	41%	51%	**81%**	6%	51%	19%	not assessed			
M'bique	**94%** [1)] → **92%**		**79%**→60%		Skills **90%→73%**, spares 54%→34%, where buy **94%→85%**, what cost **88%**→65%				**87%**→64%		61%	
Rwanda	52%→no data		No data		65% [2)]→ know where report **95%**				For districts **80%**		32%→no data	
Zambia	59-89%	**95%**	33%		2%	5%	2%	5%	18-25%	30-65%	6%	No data

1) Including key functions filled 2) here: committee's easy access to trained artisan and spares.
Sources: Anscombe, 2013, Weconsult, 2013, 2015, Synovate, 2012, Ipsos, 2015, Anscombe, 2012.

Institutional sustainability at district level.
Little systematic data was found across the programme on the districts' capacity to give sustained support to community management. In Malawi, data was gathered on quality of district supervision of technical works (52% adequate), training of WPCs (69% adequate, but dropped to 45% on maintenance fund) and monitoring WPCs through regular visits (43%). All these costs are currently paid by UNICEF. The budgets of the districts had not been investigated, but they were likely to be insufficient to sustain the costs of good quality drilling and installation along with capacity building and monitoring visits.

Mozambique districts had improved their data base. From 2013 onward, all districts kept a manual data base and had a person in charge. In 2013, 97% accepted community requests for help (no data for 2014). In 2014, 96% had updated their functionality data, an increase of 21% from 2013. However, the adequacy of resources to support the communities was not assessed.

Indicators in Rwanda districts were also the presence and regular update of WP data bases. In 2013 the scores were part of the overall district score and were not reported separately. In 2014, keeping and updating a district water data base was 100%. In the first year after hand-over all districts had so far been able to cover costs that were the responsibility of the district (Ipsos, 2013, 2015).

In Zambia, the researchers reviewed the whole institutional process, from allocation via supervision of implementation (quality of works) to training and monitoring WPCs. In total 22 indicators were scored, with an average score of 62%, but without details on how overall score was built up. One of the nine district (Petauke, see also Box 1) did very well. However, nowhere was district capacity already adequate to sustain communities on service management (Anscombe, 2012)

Environmental sustainability.
The measurement of this variable was limited to observed presence and conditions of drains and soak pits at water points and preventing source contamination from cattle (Table 17). Results were generally unsatisfactory. In Rwanda a drop of 31% was noted for drainage from 2013 to 2014. The relationship with climate change was not addressed anywhere, but Zambia is developing a system to regulate groundwater withdrawal (UNICEF-Zambia, 2016).

Table 15 Sustained preservation of environmental hygiene at improved water points

Country	Drainage present	Soak pit present	No stagnant water	Cattle watering at WP
Malawi	**100%** [1)]	no data	66%	1%
M'bique	In questionnaire, but no results reported			
Rwanda	**100%**→69%	"a few lacking"	**100%**	no data
Zambia	68%	68%	44%	24%

1) But wrong slab dimensions and other construction errors. Anscombe, 2012,2013, Weconsult, 2013, Ipsos, 2013, 2015

Technical functionality and sustainability
After up to 4 years after completion, results of new facilities were fair (89%-100% functional) (Table 18). In Mozambique, which had a mix of systems up to eight years old, functionality was lowest at 89%, against a national average of 80% in 2011 (UNICEF-Mozambique, 2014). No age-specific data was reported.

The data on repair duration gave a minimum score < 1 wk. This may mean that when stored water is finished after 1-2 days women have to go elsewhere for several days (where, was not seen). To score for % repairs within 2 days which Mozambique introduced in 2014, was an important improvement, but so far the regional offices did not adopt this as their programme monitoring standard.

In Malawi and Zambia long-term technical sustainability of repaired hand pump wells was at risk due to insufficient overhaul techniques (no aquifer and sump cleaning with a compressor and no proper checks of yield and water quality, Anscombe 2012, 2013). The same applied to Rwanda with a lower quality construction in 1/5th of the boreholes, against construction weaknesses in 5% of piped systems (Ipsos, 2015).

Table 16 Technical sustainability for water supply (new and rehabilitated) at community level in sample locations

Country	Functionality at visit	Water Quantity (adequate yield)	Water Quality	Breakdown(s) experienced	Av. duration
Malawi	**94%** & **83**% [1)]	**94% & 83%**	**93% & 94%** [2)]	24% [3)]	55% <1 wk, 32% <1 mnth
M'bique	**93%** →**89%**	**92% & 93**%[4)]→84%	Not assessed	35%	14% <1 wk, 21% > 1 wk [2)]
Rwanda	**100%**→**100%**	**90%** [2)]	**100%** [5)]→	**10%**[7)]→17%	6% piped, 11% BH <1 wk, but **100%** stand-by pumps
Zambia	**90% & 95%**[6)]	**90% & 85**%	**85%** & 5% [6)]	"most points"	no data

[1)] Working and used [2)]In 2014 69% of breakdowns repaired within 2 days [3)]According to sampled households [3)]pump age 1-5 yr, breakdown somewhat increases with age [4)] As measured and according to users [5)] tests met WHO standards [6)] But 10% of HH sample reported breakdowns leading to non-use. No data on range and average of duration.
Sources: Anscombe, 2013, Weconsult, 2013, Ipsos, 2013, 2015, Anscombe, 2012

Social sustainability

The same lack of agreement on what constitutes social sustainability made it impossible to extract a set of common indicators. For the purpose of this evaluation, the common indicator chosen was the percentage of households living within the 'catchment area' of the improved water point only use the installed water point or an alternative safe water point for at least all their drinking water. Use of unprotected sources for hygiene is generally no problem, unless there is a risk of transmitting schistosomiasis or guinea worm. What a water use catchment area is depends on the local definition: it may be living within the standard maximal distance to a hand pump (as in Mozambique) or in the village (section) served by that pump or communal tap or even having a private connection (Rwanda). Table 19 gives the data, but methodological issues inhibited scoring. In Malawi single safe water source by sample households was 93%, but this may relate to the sampling method (living in the catchment area instead of sampled from the whole community). For Rwanda it was not clear if households who used the improved source did so exclusively, at least for drinking purposes. Use may also have depended on distance, but data on use and distance (both given) were not correlated. Furthermore, all data were self-reported and as many households were aware of water safety aspects, socially desirable rather than real behaviour could be reported. Water use patterns are complex and vary with seasons and distances and so demand more rigorous research than one question in a repeated sustainability check.

Table 17 Reported use of improved water points at least for drinking by sample households

Water source	Boreholes	Taps	Other protected	Unprotected source
Malawi	**93%**	–	no data	no data
M'bique	no data on water use			
Rwanda	27%→22%→15%	80%→76%→**78%**	32%→17%→18%	44%→7%
Zambia	no data on purposes of use			

Sources: Anscombe, 2012, 2013, Weconsult, 2013, 2015, Synovate, 2012, Ipsos, 2015

Sustainability of sanitation

Sustaibility of sanitation was checked in two ways: the sustainability of village ODF status (Table 20) and the quality or durability of the constructed latrines including handwashing provisions with water and soap/ash (Table 20). All consultants used 2 – 4 different ways to measure sustained ODF: observation of community area, observation of traditional defecation area and asking households about village behaviour. This data can therefore be taken as reliable and showed that ODF was not sustained: community slippage percentages of

4% to 42% were reported. The latest SC in Mozambique (not in table) showed that in 2014 ODF villages had stabilised at 83%, but no clear trend was visible from the six SCs from 2008 to 2014 (Weconsult, 2015).

Table 18 Sustainability of sanitation: degree to which certified ODF communities remained ODF

Country	Human faeces observed in		OD observed in practice	HHs say OD practiced by others	HHs have no private latrine	HHs say use only latrine
	community	traditional sites				
Malawi	31% / 11% [1)]	31% / 42% [1)]	Not done	Not asked	29%/21%	97% /100% [2)]
M'bique[3)]	4%/0%/ 13% / 17%		13%/8%/19%/not done	Not asked	4% / 6%	Not asked
Rwanda	12%→10%	Not done	Not done	10%→10%[4)]	6% →7%	95%→no data
Zambia	20% (> 2 stools observed/c'ty)		Not done	Not done	No data	

[1)] Awaits certification/certified [2)] Latrine use of infants [3)] 2010-13, observed "in c'ty surroundings" [4)] 12%-17% / district
Source: Anscombe, 2012, 2013, DHV, 2012, Ipsos, 2013, 2015, Weconsult 2013, 2014.

Table 21 gives the data on the presence of used toilets and observed hygiene. Objective data on hygiene were not always included (faecal soiling) or clear (lids may be present but not all over holes). Consecutive SCs in Mozambique showed that performance first dropped, but stabilised in 2014. Latrine presence fell from 96% in 2011 to 83% in 2013 and 2014. Slabs were seen in 94% of latrines in 2011 and 66% in 2014. Other indicators had also dropped. The researchers ascribed this to population expansion and absence of ongoing promotion (local health staff were not involved and NGOs stopped at the end of their contract). In Rwanda on the other hand the quality of latrines had been sustained. More worrying was that filled-up latrine pits (29% in 2013) increased to 36% in 2014 (Ipsos, 2015). What happened when pits were full was not investigated, nor what was done with the sludge in case the pits were emptied. In Rwanda the situation generally remained stable in spite of population growth.

Indicators for handwashing with water and soap or ash scored much lower than latrine indicators. The reports also did not specify the handwashing method. If all washed hands with soap in the same bowl with water this is not scorable as hygienic. Moreover, in the African household hierarchy the adult men will wash first in the cleanest water, leaving the soiled water for women and young children. No comparative data are included here, but in Mozambique handwashing provisions dropped from 89% in 2011 to 74% in 2012, 48% in 2013 and 27% in 2014. Observed water dropped steadily from 79% to 26% and soap or ash from 78% to 18%. Clearly making handwashing provisions did not become a sustained habit. In Rwanda handwashing facility scores improved; no individual trend data reported (only clustered scores).

Table 19 Achievement of latrine use and hygiene in sample households in 5 supported WCARO countries

Country	% HH visited	Own latrine & use (adults)	Child faeces in latrine[1)]	Lid (on hole?)	No fecal soiling	Easy to clean [3)]	HW facility observed		
							present	with water	w. soap/ash
Malawi	c. 7%	94%	no data	29%	80%[2)]	15%	32%	28%	7%
M'bique	10%	93%	no data	75%	no data	81%	27%	26%	18%
Rwanda	2%	93%→93%	no data	19%	87%→88%	18%→17%	12%→37% [4]	43%	55%
Zambia	30%	100%	no data	54%	58%[2)]	no data	39%	no data	11%

1) For HH with children aged X-Y 2) Not adequately defined: "clean and tidy" 3) Slab smooth and from durable materials (cement, plastic, sometimes timber also accepted) Objective definitions not harmonized. 4) 47% at homes in 2013.
Sources: Anscombe, 2012, 2013, Weconsult, 2014, Ipsos, 2014, 2015.

Findings on institutional sustainability of sanitation varied. In Malawi 85% of communities reported being visited by the local Health Assistant also after triggering (Anscombe, 2013). In Mozambique the Health Ministry was reported to be unable to take on CLTS after the implementing NGOs completed their contracts with UNICEF (UNICEF-Mozambique, 2013). Mozambique's newly established water technicians at ward level have been suggested to take also sanitation on (Drift, 2014), but without as yet going into issues of capacity, motivation, training and workload. For Rwanda no data on institutional sustainability could be found. In

Zambia CLTS includes forming local Sanitation Action Groups (SAGs). About 60% had continued to promote sanitation and hygiene with varying degrees of effectiveness (Anscombe, 2012). No data was found on sustained support from outside the community.

For schools and sometimes also local health posts each country had an institutional WASH programme. The school package was the most comprehensive and included separate latrine bocks for boys and girls, along with integrated or separate urinals, school water supplies and handwashing facilities. Software aspects covered training of teachers on WASH, formation of school sanitation clubs or WASH committees and making provisions for the continued supply of soap and toilet cleaning agents in the school funds. However, quantitative data on the sustained functionality, use and hygiene of the facilities and the sustained functionality and effects of the institutional arrangements was only collected in Malawi and Zambia (Anscombe, 2012, 2013). Sustainability checks in Rwanda had only qualitative data (Synovate, 2012, Ipsos, 2013, and the checks in Mozambique did not include schools (DHV, 2013, Weconsult, 2013).
The OECD-DAC scores for sustainability are summarized in Table 22.

Table 20 Summary of Sustainability scores of four countries in the ESARO programme

Water, Financial	Highly satisfactory in Mozambique (but declining) and in Rwanda, unsatisfactory (only 1 score > 50%) in Malawi. Highly unsatisfactory (no data) in Zambia. At district level no financial data related to community support (highly unsatisfactory), except in Zambia: 1/8 districts highly satisfactory
Water, Institutional, community	Mozambique highly satisfactory on all scores, but decline in first year after end of programme. Malawi highly satisfactory on presence committees; training and equipment not satisfactory. Rwanda reduced role for committees and no data update. Zambia: some districts highly satisfactory on presence of committees; others not. All highly unsatisfactory on training and equipment.
Water, Institutional, district	Malawi: between satisfactory and unsatisfactory (training for committees is poor on financial aspects) Zambia: many good qualitative data but total quantative score (62%) not disaggregated. Mozambique and Rwanda highly unsatisfactory for support (no data) except for district monitoring data bases. No information in any country on local budgets for sustaining community management and ongoing implementation.
Environmental Water & Sanitation	Results were between satisfactory (drainage provisions) to unsatisfactory (stagnant water). Above community level: no information on integrated water resources management and climate change preparedness. No data on environmental risks in sludge management when pits are full.
Water, Technical	All indicators satisfactory to highly satisfactory in OECD DAC terms except for duration of breakdowns (unsatisfactory : > 2 days as people may then have to use unprotected sources or walk far to a protected source) or highly unsatisfactory (no data: Rwanda, Zambia) and highly unsatisfactory for water quality (Mozambique no test) and Zambia (only problems rehabilitation)
Water, Social	Highly satisfactory shift to improved sources in Malawi and Rwanda (piped water, not boreholes). Highly unsatisfactory (no data) in Mozambique and Zambia. More valid measurement needed.
Sanitation and Hygiene	Although freedom from open defecation was highly satisfactory, sustainability was not. Slippage rates of between 10% and 31% (for certified communities) were reported. Sustained support from local leaders and districts were unsatisfactory. In Mozambique, support from UNICEF paid NGOs and village volunteers was unsustainable over time. Handwashing data unsatisfactory (ambiguous) and no data on sustained promotion from districts. Focus on more durable toilets (Mozambique, Malawi) with role for local private sector contributes to sustainability, but no systematic data on support.

Source: this study

STRENGTHENING THE ENABLING ENVIRONMENT

National policy and programmes

The water programme strengthened especially the districts, which was in line with national policies for decentralisation. Training and stakeholders meetings, including on the outcomes from the annual sustainability checks were generally mentioned (UNICEF-Malawi, 2012a, 2013, UNICEF-Mozambique, UNICEF-Rwanda, 2012, UNICEF-Zambia, 2013, 2016). UNICEF Zambia trained 675 Area Pump Mechanics,

while the target was only 240. UNICEF further influenced especially sanitation policies and programmes. In all countries CLTS is now the national policy, putting an end to ineffective and costly toilet subsidies. In Zambia Dutch funding was used to develop, in 2012, the sanitation and hygiene component under the National Rural Water and Sanitation Programme. This and the progress achieved levied DFID funding for CLTS, reaching another 1,102,355 men, women and children in 16 districts. In addition, the Zambian Ministry of Finance introduced a separate budget line for sanitation and hygiene. A special WASH directorate was created in the Ministry of Local Government and Housing to improve coordination and action. UNICEF further initiated WASH in schools and clinic in all country programmes, with separate toilet blocks for girls and boys/males and females (UNICEF-Zambia, 2016). In the region UNICEF is now assisting national CLTS programmes with the help of the CLTS Rapid Appraisal Tool, or CRAP (not ironically meant). This assesses the extent to which households build or improve toilets to or beyond the basic sanitation level and if ODF status is sustained (pers. com. head of ESARO WASH programme)

Community participation

All countries adopted community-managed water supply and sanitation. No information was found on the participatory processes for water services, except in two SCs in Zambia and Rwanda. Anscombe (2012) reported on community participation in project allocation and borehole siting. In Rwanda (Ipsos, 2013, 2015) households were asked about their own participation in sanitation and hygiene promotion (61%, 62%) and to what extend vulnerable villagers (people with disabilities, the poor, widows, the elderly) participated (81% in campaigns and 76% in committees). However, this data may be inflated due to socially desirable answers.

Governance

Data on governance was only collected in Malawi and Zambia. In Malawi, 30% of the projects in the sample had been allocated by the higher authorities, and not through the prescribed procedure of community application. Also, from all WPCs with a new source, 44% reported that the previous source used had already been a protected one. Whether this implies any irregularity cannot be assessed however, since the former sources may also have been far or located in another community. As to vandalism, 2 cases of thefts of underground parts were reported. On the other hand, 55% of WPCs had chained new pumps against theft when not in use (Anscombe, 2012). In Zambia the district councils' democratic water supply allocation process has meant that public sites were favoured. In the SC only 2% (2 systems) were found to be in a private location: one in a chief's compound and one in the grounds of a women's club, although the original plan did allow such semi-public locations (UNICEF Zambia, 2016). Petauke district stood out in its quality of water governance (Box 1). Some districts also did better in levying the prescribed village contributions (Table 15).

Box 1 Best Practice in Petauke district, Zambia

In Petauke district in Eastern Province, Zambia, the sustainability check team found several good practices. For equitable and transparent water supply allocation the District Council uses ward maps with served and unserved communities. Informed about the procedures is spread by radio. The district collects the mandatory community-level contributions. These are placed in a special fund and feed back into support of community management and new construction and replacement. Use of the funds must be authorized by the full District Council. The district has a pro-active RWS unit and actively encourages Water Point Committees (WPC) to collect fees for local maintenance and repair. The RWS unit is well-equipped and is the only one of the 9 districts to have an e-based filing system (Anscombe, 2012)

Partnerships

Financial partnerships were developed with international NGOs. in Malawi they were Canadian Physicians for Aid and Relief (CPAR), Development Aid from People to People (DAPP) and Engineers Without Borders Canada (EWB), Cooperatione Internazionale from Italy, the Irish GOAL and Fresh Water (unspecified) (Malawi progress report 2012). In Mozambique INGOs were involved as implementers for sanitation, and more recently national NGOs. In Rwanda Dutch SNV supported the training of district staff, water technicians and village water committees (SNV-Rwanda, 2012). National NGO partners were Compagnons Fontainiers Du

Rwanda (COFORWA) and Aquavirunga (UNICEF-Rwanda, 2012). In Zambia Dutch Practica trained for better well drilling (Anscombe, 2012). Cooperation with the local private sector covered borehole drilling, hand pump repairs, sanitary toilet construction and in Rwanda local companies running piped water services). Local and expat universities and research institutes (minimally 3) and local consultancy firms, including from neighbouring countries executed independent studies (SCs). Nowhere was an overview found of the numbers and types of local partners and their share of the support costs.

The cooperation of the Netherlands with UNICEF WASH has led to new partnerships of UNICEF with other donors: the African Development Bank for school WASH in the Comoros (UNICEF-ESARO, 2013), One UN Fund, the Belgian Government, DFID and the EU for CLTS in Malawi (UNICEF-Malawi, 2012a, 2013); DFID in Mozambique for sanitation and hygiene (Drift, 2014) and DFID for CLTS in Zambia (UNICEF-Zambia, 2016). In Malawi, China drilled 600 WPs, but without any social component. In response, UNICEF took it onto itself to finance support for establishing WASH committees (Mdoe and Maweru, 2013). UNICEF Malawi reported a partnership with the World Health Organization through the UN Development Assistance Framework and within UNICEF itself with the Child Protection Teams for the kindergartens (UNICEF-Malawi, 2012a).

Peter Harvey, WASH regional advisor in ESARO mentioned that the multi-year, multi-country support from DGIS was important because it allowed long-term programming and a 1-year inception phase. This, he believed, is what explained the high effectiveness and efficiency scores. Weaknesses were the relative under planning and financing of strengthening decentralized government support systems and public financial management in villages and at higher levels.

Links/collaboration with other sectors/ programmes

Two cases of cooperation within UNICEF were found. In Malawi WASH worked with the Orphans and Vulnerable Children (OVC) and Child Protection teams to scale up water and sanitation in Community Based Childcare Centres (UNICEF-Malawi, 2012a). In Zambia the reproductive health programme supplemented the 82% output of WASH facilities in rural health centres under Dutch assistance. (UNICEF-Zambia, 2016)

Public accountability

No data was found on public accountability for service delivery and financial management at community level and above, except for some district councils in Zambia reported above.

Resources and market development

In Mozambique national funding for the rural water programme has increased. The country also gradually absorbs the new UNICEF technicians at ward level into the government system (Draft, 2013). Market development occurred especially for technical services (drilling, hand pump repair, toilet construction), consultancies and research and spare parts supply. UNICEF Malawi has done a study on sanitation marketing development (UNICEF, 2013). The Zambia SC study had many quality data on drilling contractors.

Overall results on support to the enabling environment were satisfactory with regard to national policy/ programme development and donor support. On the other aspects data was insufficient for scoring.

CROSS CUTTING ISSUE: GENDER

All sustainability checks contained some gender statistics. A summary is presented in Table 23. In Rwanda the last sustainability check available (Ipsos, 2014) had no specifics other than saying that women were represented (The rule was 50% men, 50% women).

Table 21 Summary of gender statistics from sustainability checks in four countries

Country	WPC formed/functional		% WPC with women	% women in WPC < 50%	% women in WPC ≥ 50%
	New	Rehab			
Malawi	98%	100%	99%	1% 1)	99%1)
M'bique	94%		73%	58%	15%

Rwanda	52%		78%	52% [2)]		0%	
Zambia	59-89%	95%	100%	27%	11%	73%	89%

1) On average 60% women members, with 3 in senior roles. Only 1 WPC had only men. 2) Data for 2013. No data for 2014.
Source: Anscombe, 2012, 2013; Weconsult, 2013, Synovate, 2012 Ipsos 2013, 2015.

In Malawi trends on gender balance showed a 5% increase from 2008 to 2009 and stabilization at 58% in 2011 and 2012. In CLTS mostly women participated, although leader orientation had been gender balanced. The common reason given was "men do not see household / community sanitation and hygiene as their responsibility – rather it is for the women!" (Anscombe, 2013: 74). Yet to change practices men must also be influenced, as in most cultures wives and daughters cannot question male behaviour. In Zambia, Sanitation Action Groups (of which 60% were still active in 2012) had on average 52% males and 48% females (Anscombe, 2012). In Mozambique, women also participated in the technical maintenance group, although without a clear trend (sample of 2011: 57%, 2012: 34%, and 2013: 44% women); 73% of these groups interviewed in 2012 said they had been trained; whether also women got technical training was not reported. The regional report of UNICEF gave empowerment of women to plan, control and manage service delivery as one of the programme objectives, but only states that "country reports say remarkably little about equity and gender, and the impact of project interventions on reducing disparities and empowering women and girls in particular. This is an area which country offices can strengthen by disaggregating data, prioritising those most in need and adopting empowerment strategies" (UNICEF-ESARO, 2013: 14). No data were found on follow up to this observation from the regional office.

Primary gender results for water management committees were highly satisfactory in Malawi, Mozambique and Zambia, but no data were given on women attending, speaking out and influencing decisions in committees and on continued commitment from men. In Zambia schools with a sufficient number of separate toilets for girls also had higher enrolment figures for girls as well as lower class duplication and school drop-out rates (UNICEF-Zambia, 2016).

EFFICIENCY

Costs and resources

In general the independent sustainability checks report good quality construction with the exception of wastewater drainage (see environmental sustainability) and the rehabilitation of existing facilities. The current quick repairs of boreholes at a unit cost of around US$ 750 may in the long run be less cost-efficient than a full overhaul at some US$ 2,200/borehole, with proper water quantity and yield tests and refresher training for the WPCs (Anscombe, 2012, 2013).

Overall utilisation of the Dutch funds was slightly more than planned (107%), with UNICEF picking up the difference. This amount will increase somewhat further as two countries have 11 months left. The unit cost or cost per benefitting person of a new water supply was US$ 18,34, 23% higher than budgeted, while that of a repaired supply was US$ 5,6 or 49% lower than estimated, probably as a result of the limiting testing and underground work. The unit costs for sanitation promotion was the same as estimated (US$ 4.2). For hygiene promotion it was 54% more expensive at USD 3,3 per person reached. The unit cost for schools was 42% lower at US$ 10,5. The greatest cost increase was for WASH facilities in health centres: US$ 17,527 per centre was 117% higher than originally estimated (UNICEF-ESARO, 2014a). Both water and sanitation unit costs were below the norms of IGG (US$ 25 for water supply and US$ 20 for sanitation).

Time and budget

Targets achievements by end 2013 (UNICEF-ESARO, 2014a) were: 95% new water supply, 167% rehabilitated supply, 89% sanitation, 82% hygiene, 109% schools and 46% clinics. Since Rwanda and Zambia have one year left, the end output/outcome will approach (and for 2 domains surpass) the targets. This data is well in line with the total percentages given in Table 10 above. For sanitation and hygiene the outcomes are not users,

however, but numbers reached, as behavioural outcomes have been reported as numbers of ODF villages, and not (members of) households. Moreover, measurement of handwashing facilities as proxy of handwashing with soap has a low overall validity, because the presence of water/soap/ash was not always observed separately. Finally the number of students served was often a fixed average per school, and not actual numbers of boys and girls pupils.

The above targets were reached with a cost overrun of 7%, with one more year to go in Rwanda and Zambia. They occurred in spite of lower than budgeted costs for rehabilitation and schools. The main reason was the unit costs of new water supplies. These supplies formed 50% of the budget and the unit costs were 23% higher than budgeted. The independent sustainability checks in Malawi and Zambia (Anscombe, 2012, 2013) showed however clearly that switching to costlier borehole in Malawi and higher drilling cost in Zambia were both justified. In Malawi a UNICEF-commissioned independent water quality study found that manually drilled shallow wells had a higher E-coli contamination (Taylor et al, 2012). Concluding, the score on efficiency was *highly satisfactory* for timeliness and *satisfactory* for procedures and costs in terms of not surpassing budgets. For sustained behaviour change and borehole rehabilitation the budgeted cost were too low given the problems with quality of construction and sustainability of ODF.

APPLICATION AND LEARNING

Effective monitoring and Results Based Management

The internal monitoring system of UNICEF consisted of bi-annual data collection on physical and financial progress using data from country offices and (improved) government monitoring systems. The data was consolidated by UNICEF ESARO in annual progress reports. Annual sustainability checks (SC) or audits of cumulative new water supplies, ODF certified villages and WASH provisions in schools and health posts were carried out by independent consultants to measure the continued functionality, management, financing and hygienic use (UNICEF-Malawi, 2012b). Dutch funding is available to continue the checks for up to ten years.

DME introduced the annual sustainability check in Mozambique in 2008 to provide hard data on the continued functionality and use and the underlying conditions (institutionally and financially good management and environmental safety). It has since been expanded to all programmes for giving an extra 50 million people access to improved WASH, which includes the programmes with UNICEF. The checks are a separate and independent monitoring tool financed by DGIS. The Regional Office of ESARO developed the sustainability assessment framework on which country SCs were based, assisted on ToR development and reviewed proposals and reports. However, over time many checks became more elaborate, complex and expensive than originally envisaged, impeding their potential to become part of national post-construction monitoring (UNICEF-ESARO, 2014).

The International Water and Sanitation Centre (IRC) and UK-based Aguaconsult did an independent review of the instrument in 2013, which included field visits. They concluded that the stakeholders generally recognised the SCs as a powerful monitoring instrument. Appreciation was expressed for the independent data, their comprehensiveness and quick availability, the quantative and rigorous[14] approach and the possibility to compare results, although scientifically this was not always possible. A spin-off expressed by UNICEF ESARO was that SCs are also an advocacy instrument, in that they show that UNICEF is seriously monitoring sustainability issues. Most national staff and NGOs saw the SC as a "UNICEF tool", developed, applied and used primarily by UNICEF only. Only the Rwanda government introduced the SC in its new WASH programme with Japan International Cooperation Agency (JICA). The evaluators concluded that while SCs are an excellent initiative there is a need to demystify indicators for district uptake, facilitate a systemic rather

[14] The reviewers did not agree on this and made suggestions for still more reliable data.

than a case-by-case approach, integrate the key aspects into national MIS, and allocate a percentage of the budget to strengthen participation of districts, national agencies and NGOs (Lockwood et al, 2013).

Recently, Mozambique and Zambia began to monitor sustainability more nationally. In Mozambique, the district digital data bases became part of the National Monitoring and Evaluation System on WASH, covering water point functionality and villages achieving and sustaining ODF status. The country also started to include and harmonise other donor-based monitoring systems on WASH to improve planning, transparency of investments and sustainability (UNICEF-Mozambique, 2014). UNICEF Zambia (2016) introduced mobile-to-web (real time) monitoring of functionality in the Dutch-supported programme. This is now being scaled up to 46 districts and covers 20,000 villages. All district chiefs obtained a tablet to create data access and enhance local accountability on access and sustained service delivery. The Zambian government intends to make this part of the national MIS system on WASH.

The cost of the checks were relatively modest. At an average cost of US$ 75,000 (UNICEF-ESARO, 2014a) they constituted 0,08% of the Dutch contribution and 0,05% of the overall programme costs. (Lockwood et al gave a cost of 3% of the Dutch contribution). The SCs raised awareness of sustainability issues and enhanced efficiency (Table 24). UNICEF indicated that the study needs to be simplified and no longer use composite scores. In their current form they are beyond government capacity, (Lockwood et al, 2013, UNICEF-ESARO, 2013). An impact evaluation was done in Mozambique in 2014 (Amsterdam Institute of International Development and UNICEF Evaluation Office; no report found on file). Both Mozambique and Rwanda did baseline studies, but no reports were filed and the data was not or hardly linked to later results.

Table 22 Impacts from annual sustainability checks on programme efficiency and effectiveness

Country	Impacts
Malawi	Switch to from manually drilled shallow wells to boreholes for better bacteriological water quality. Training meeting with all drillers held. Assistance to districts to improve drilling supervision. Joint UNICEF-Gvt field visits to 5 districts with high technical vulnerability scores. Manual for WPCs made and spread. Training improved to area mechanics in private sector. Strengthen monitoring and action system of districts.
M'bique	No response found to DGIS announcement of withholding payments until proof of correction of SC 2012 findings: repair of 38 (5%) non-functional WPs and 47 (16%) slipped ODF villages on 19.7.13
Rwanda	To SC 2011: Project shifted from Ministry of Infrastructure to national water authority (EWSA), EWSA recruited Coordinator/Supervisor to whom also districts report. Task Force established to follow up repairs. Drainage channel and soak pit and source chlorination included in pre-payment check of private constructors. Shift of some staff from HQ to districts. All sources to be chlorinated and private service operators will be trained on chlorination after recruitment.
Zambia	Quality Assurance study of drilling procedures done. Driller contracts revised. Repairs will be made and subjected to rigorous verification before final contractor payment at end of liability period. Responsible ministry allocated extra resources for verification and handover WPs to villages. A joint survey found 9/11 districts capable to supervise drilling after refresher training. They get funds to make and manage drilling contracts themselves. In the others UNICEF took direct charge until capacity has been built. In all 11 districts UNICEF engaged private sector firms for quality control. A lower cost standard child friendly school latrine block is being developed jointly. Government assigned six senior civil servants to coach local government to improve sustainability of CLTS.

Sources: Anscombe, 2012, 2013, UNICEF Management responses Malawi, Rwanda, Zambia; EWSA, 2012a, b, c, EWSA and UNICEF-Rwanda, 2013.

Table 25 gives the reports to DGIS as scheduled and found on file or re-sent by UNICEF on request. The dashes indicate the ones not found on file or retrieved otherwise. Missing were copies of progress reports from Malawi after 2013 and regional reports for 2014 and 2015. Earlier sustainability checks in Mozambique (2009, 2010 and 2011), Malawi (2009, 2010) and Rwanda (2011) fell outside the scope of this study (2012-2015).

Table 23 Reports on the ESARO programme as scheduled and on file in DGIS for the period under review (2012-2015)

Region	Report/Year/Country		Comoros	Malawi	M'bique	Rwanda	Zambia
ESARO	UNICEF Country Progress Report	2012	X	X	X	X	X
		2013	Project completed	X	X	X	X
		2014		–	X	X	X
		2015		–	–	X	X
	UNICEF Regional Progress Report	2012	X				
		2013	Project completed	X			
		2014		–			
		2015		–			
	Sustainability Check	2012	No SC	No SC	X	No SC	X
		2013	Project completed	X	X	X	X [1)]
		2014		No SC	X	X	No SC
		2015		No SC	Report expected	Planned 2016	Planned 2016 [2)]
	UNICEF & Nat Gvt Management Response	2012	No SC	26.9.13 & 15.11.13 & 11.6.15		4.2012 & 29.3.2013	21.9.12
		2013	Project completed		–	29.11.2013	–
		2014		–	–	27.4.2015	–
		2015		–	–	–	–
	DGIS Management Response	2012	No SC	30.9.13	19.7.13	–	not dated
		2013	Project completed	–	–	–	–
		2014		–	–	–	–
		2015		–	–	–	–

Source: This study. [1)] March 2014 [2)] ANSCO, 2015

In Malawi the mid-term review (2011) fell outside the scope of this study. An end evaluation was completed in 2016, but no copy could be retrieved. Mozambique seemed to have been the only country with a baseline study (2008), a mid-term review (2010) and end-evaluation (2013). The latter study was reviewed, but did not relate to the baseline data; this will be presumably be done in a post-survey under implementation in 2016. In Rwanda, DGIS did three programme reviews (2010, 2011 and 2013) and a regional review (2013). In Zambia UNICEF had two baselines and two evaluations carried out. From neither country the copies concerned could be retrieved. End evaluations are underway or planned in Malawi, Mozambique (end survey) and Zambia. Except for the Mozambique end-evaluation, none of the reports of these studies was fund on file.

CASE 2: WCARO PROGRAMME

The largest supported programme is in West and Central Africa under UNICEF WCARO. The targets were 3,5 million new safe water users and 3,3 people with basic sanitation. Planned for 2013-2015, it was extended to December 2017 with a proportional budget increase. The region received 48% of total WASH funding for originally 9 countries: Benin, Central African Republic, Côte d'Ivoire, Ghana, Guinea, Liberia, Mali, Mauritania and Sierra Leone (Table 5). On 24-11-2014, Guinea, Liberia and Sierra Leone became the separate Ebola Virus Disease (EVD) programme, an example of how once an initiative was taken, cooperation with UNICEF made a rapid response possible (Box 2).

Box 2 Cooperation with UNICEF allows rapid response to Ebola crisis after the initial initiative

When TV reports showed how victims died in the streets without anyone daring to help them, the cooperation with UNICEF made it possible to start action at very short notice. Within two days the Dutch budget holder had obtained permission from the Dutch minister for development cooperation to divert part of the WASH funds to a response to the Ebola epidemic, while UNICEF obtained written requests for assistance from the concerned ministers in the three affected countries. These funds meant a crucial start for financial and technical support to help the victims and eventually stop the transmission of the virus.

Table 26 gives the revised targets for five countries. Schools and clinics are in Table 31 below. Six countries were supported for the full period 2013-2015 and nine countries for 2013-2014. The tree EVD affected countries re-joined the partnership in 2016. Results in 2016 fell outside the scope of this study.

Table 24 WASH Targets in 9 supported WCARO countries

Targets 2013-2017		Benin	CAR	C d'Ivoire	Ghana	Mali	M'nia	3 EVD	Total
Water Supply	New WPs	NA	180	300	100	200	35	28	843
	Repair/rehab		100	150	80	NA	NA	1	331
	New network		NA	NA	30	20	5	3	58
	New safe water users		140.000	225.000	100.000	80.000	40.000	15.000	600.000
HWT	No. HHs	60.000	18.400	37.500	62.500	88.000	96.667	3.000	366.067
Water Safety	No. people served	360.000	140.000	375.000	500.000	440.000	580.000	19.300	2.414.300
Basic San	New basic toilet users	360.000	450.000	500.000	500.000	440.000	600.000	34.900	2.884.900
ODF villages	No. villages certified	1.900	1.080	1.500	1.000	600	1.500	74	7.654

Source: UNICEF-WCARO, 2015

RELEVANCE

Needs

Table 27 gives the WASH situation in 2011, one year before programme start. Access to improved sanitation was universally low, even in countries in the HDI middle category (Ghana). Data on poverty in the targeted regions and districts was not found. However, World Bank data showed that in Benin the poor practiced OD 2,5 times more often than the non-poor (MedAconseils, 2015). In CAR the selected locations were characterised by high remigration after the population had fled because of local conflict; they were also the worst served and had high child mortality and malnutrition rates and low school enrolment (data not sex-disaggregated). (UNICEF-CAR, 2013). Mauritania selected the areas which combined the highest needs with sufficient feasibility in terms of groundwater and human resources (UNICEF-Mauritania, 2013). In Ghana the selected districts were all in water scarce areas. Water safety and home water treatment (HWT) were added in the region because of high contamination of drinking water in homes. E.g. a study by DNSP in Benin in 2014 found e-coli in 71% of water samples at home for water collected from open sources and 60% in home stored tap water (MedAconseils, 2015). Globally the region had the worst school conditions: 56% no water, 64% no sanitation (WCARO, 2013). In only one country were statistics on gender conditions part of the WASH proposal (UNICEF-Sierra Leone, 2013)

Table 25 Access to improved rural water supply, sanitation and incidence of open defecation by country by 2012

Country	Access improved rural water supply	Access improved sanitation (rural)	Estimated rural OD	Country ranking HDI (Highest 1 - Lowest 188)
Benin	69%	5%	76%	166
C d'Ivoire	68%	10%	51%	172
Ghana	81%	8%	33%	140
Guinea	65%	11%	26%	182
Liberia	63%	6%	67%	177
Mali	54%	15%	18%	179
M'tania	48%	9%	76%	156

S. Leone	42%	7%	39%	181

Source: http://www.wssinfo.org/fileadmin/user_upload/resources/JMP_report_2014_webEng.pdf UNDP, 2016: HDI Index 2010

Alignment

In all countries the UNICEF-supported programme is part of the national targets for rural water supply and sanitation. CLTS (community led total sanitation), which UNICEF introduced and piloted in the region, has become the national strategy in all countries. This strategy aims at first achieving freedom from open defecation, whereby households may build simple latrines or share with neighbours before going for the basic models (or more) set as standard by WHO and UNICEF in the Joint Monitoring Programme (JMP) for Water Supply and Sanitation. UNICEF has also pioneered WASH in schools, a policy and programme for every primary and secondary school to have water, separate sanitary toilets for girls and boys and teachers and handwashing provisions with water and some kind of soap, but this has not yet become a region-wide national policy.

EFFECTIVENESS

Outputs and outcomes

Water. Table 28 gives the outputs and outcomes for water supply and water safety after 55% of the available programme time (UNICEF-WCARO, 2015). Overall, progress on repaired water points was on track. For new water points there was a 15% delay due to start-up problems with hand drilled wells (see further under efficiency below). Country-wise there were differences: below-target outputs for new water points in CAR, Côte d'Ivoire and Mali and in Ghana for piped systems and wells repair, but new wells had almost been completed. The number of new people with access to safe water (outcomes) had lagged behind. Factors were (1) smaller village sizes than estimated and (2) low outputs on adoption of home water treatment methods, except for Benin (74%). The three EVD countries completed the revised outputs. After solving the Ebola crisis extra financing was made available to catch up with the original WASH targets (not included in Table 27).

Table 26 Progress on water supply and safe water use targets in 9 supported WCARO countries: status at 30 Sept 2015

Domain	Progress against targets	Benin	CAR	C d'Ivoire	Ghana	Mali	M'tania	3 EVD	Total
Water supply	Target new WPs	NA	180	300	100	200	35	28	843[1)]
	Met Sept 2015 (55% time)		58	38	99	87	26	28	336
	% met		32%	13%	**99%**	44%	**74%**	**100%**	40%
	Target repair/rehab WPs	NA	100	150	80	NA	NA	1	331
	Met Sept 2015 (55% time)		100	83	0			1	184
	% met		**100%**	55%	0%			**100%**	**56%**
	Target PWS network	NA	NA	NA	30	20	5	3	58
	Met Sept 2015 (55% time)				2	10	4	3	19
	% met				7%	50%	**80%**	**100%**	33%
	No. new safe water users	NA	140.000	225.000	100.000	80.000	40.000	15.000	600.000
	Met Sept 2015 (55% time)		79.000	65.149	34.843	40.800	4.048	15.000	238.840
	% met		**56%**	29%	35%	51%	10%	**100%**	**40%**
HWT	Target HHs practising	360.000	140000	375000	500.000	440.000	580.000	19.300	2,414.300
	Met Sept 2015 (55% time)	240.447	35070	0	81.932	0	11.832	19.300	353.861
	% met	**67%**	25%	0%	16%	0%	2%	**100%**	**15%**
Water Safety	Target Safe water at home	360.000	140.000	375.000	500.000	440.000	580.000	19.300	2.414.300
	Met Sept 2015 (55% time)	194.847	350	0	37.500	0	11.832	19.300	263.829
	% met	54%	0%	0%	8%	0%	2%	**100%**	**11%**

[1)] Down from 901 new water points in UNICEF-WCARO, 2015. In the Addendum to the MTR (March 2016 the total target became 1789 water points, 1,419 boreholes and 55 piped systems with a total of 370 group taps.

Sanitation and Hygiene. Table 29 gives the progress on sanitation. After 33 months (55% of total time) an estimated no. of over 1,4 million people out of the targeted 2.9 million or 50% had a (basic) toilet. Benin, Côte d'Ivoire and Mauretania were up to speed. In CAR the internal displacement of whole villages led to the postponement of CLTS until families could again invest their own means in making basic toilets. Hence CAR lowered its target by 56%. However, 178 more (small) villages will be covered.

Table 27 Progress on sanitation targets in 9 supported WCARO countries: status at 30 Sept 2015

Issue	Progress against Targets	Benin	CAR	C d' Iv	Ghana	Mali	Maur	3 EVD	Total
Basic San	No. of new toilet users (basic & above)	360.000	450.000	500.000	500.000	440.000	600.000	34.900	2.884.900
	Met end 2014 (55% time)	244.442	1.000	393.675	177.930	197.696	388.725	34.900	1.438.368
	% met	**68%**	0%	**79%**	36%	45%	**65%**	**100%**	50%
ODF villages	Target No. ODF villages	1.900	1.080	1.500	1.000	600	1.500	74	7.654
	Met end 2014 (55% time)	859	5	1.261	641	241	1.140	74	4.221
	% met	45%	0%	**84%**	**64%**	40%	**76%**	**100%**	**55%**

Source: UNICEF, 2015

Intermediate hygiene outcomes are reported in Table 30. The low progress in CAR, Ghana and Mali was set off by the high progress in Benin and Côte d'Ivoire. A limitation was the absence, at target setting and reporting, of data on how the figures were measured. If not based on observable indicators of good behaviour, data may not be reliable or measure something else than assumed (not valid). A cross checks with sample study data in Côte d'Ivoire s gave current knowledge of (un)safe water as 78% for HHs using WCARO water points and 77% for HHs using other water points (Hydroconseil, 2016).

Table 28 Progress on hygiene promotion outcomes in 9 supported WCARO countries: status at 30 Sept 2015

Issue	Progress vs Targets	Benin	CAR	Cote d' Iv	Ghana	Mali	Maur	3 EVD	Total
Improved hygiene behaviour	Target Est. No. people	360.000	498.000	375.000	500.000	440.000	400.000	97.000	2.670.000
	Met end 2014 (55% time)	244.442	1.000	368.635	116.052	96.577	262.199	97.000	1.185.905
	% met	68%	0,2%	98%	23%	22%	66%	100%	44%
Improved hygiene knowledge	Target Est. No. people	360.000	830.000	375.000	500.000	440.000	400.000	110.000	3.015.000
	Met end 2014 (55% time)	242.847	1.000	368.635	192.052	96.577	262.199	110.000	1.273.310
	% met	67%	0%	98%	38%	22%	66%	100%	42%

Source: UNICEF-WCARO 2015

WASH in institutions.

Table 31 give the progress on WASH in schools and health centres. Except for school latrines in Mali (83%) and latrines in health centres in Mauretania (69%) all programme countries are behind in implementation. The EVD countries have already completed their adjusted programme.

Table 29 Progress for WASH in schools and Health Centres (HCs) in 9 WCARO countries: status on 30 Sept 2015

Issue	Progress vs Targets	Benin	CAR	C d' Iv.	Ghana	Mali	M'tania	3 EVD	Total

Schools with toilets	Target new/rehab latrines	150	60	150	50	150	200	34	794
	Met end 2014 (55% time)	51	5	0	2	124	40	34	256
	% met	34%	8%	0%	4%	83%	20%	100%	32%
No. students	Target student toilet users	45.000	18.000	45.000	25.000	75.000	50.000	0	258.000
	Met end 2014 (55% time)	13.514	1.696	0	978	26.830	6.652	0	49.670
	% met	30%	9%	0%	4%	36%	13%	0%	19%
Hlth Centres with toilets	Target WASH fac.	50	30	50	0	0	120	0	250
	Met end 2014 (55% time)	9	5	0	0	0	83	0	97
	% met	18%	17%	0%	0%	0%	69%	0%	39%

Source: UNICEF-WCARO 2015

Enabling environment

UNICEF trained and equipped local hand pump mechanics and manual well drillers, who then could start their own enterprise. No statistics on outputs were found, other than training for women in Côte d'Ivoire. Besides the members of village water committees (100% female), members of 30 women cooperatives were trained for an income generating enterprise (production of chlorine), but they were not successful because they were not trained on O&M of the equipment. Engendered empowerment has come mainly from training men and women for village water and sanitation management, but here also no overall outcome data have been given (Table 32)

Table 30 Number and type of persons trained for WASH in 6 WCARO countries, not sex-disaggregated

# people trained	National NGOs	S&H promoters	HP mechanics & drillers	Teachers & supervisors	WASH c'tee members
Benin	no data	72	not applicable	no data	no data
CAR	no data	34	no data	no data	390
C d'Ivoire	Yes, but no number found	5.354	69	no data	10.463[1)]
Ghana	no data	1.669	no data	150	329
Mali	no data	382	128	275	824
M'tania	no data	35	4	20	20
TOTAL	no data	7.546	201	445	12.026

[1]) All women. Source: UNICEF-WCARO, 2015

Benefits

The only specific benefits that have sometimes been reported are low water collection distance or time. In Côte d'Ivoire the sample study found that 77% of the water points were within 5 minutes walking time from the villages (Hydroconseil, 2016). In focus group discussions women in Mali said that they used any time gains for agricultural work and making and selling their own products, for domestic work, hygiene discussions and rest. The women also said that having a toilet was a luxury and a matter of pride: one needed no longer be ashamed when receiving visitors (AMRAD, 2015). In the dry regions of Ghana none of the 18 sampled water points or 23% met the national standard of a distance of max. 500 meter. The reported average was 1 km. As a result 53% of the sampled households used less than 20 l/c/d/ (GoG and UNICEF, 2015). In Mauretania 80% of sample HHs lived within 0,5 km of the new water point, but effects for women and children were not assessed. In any case four countries planned baseline studies (UNICEF-Benin, 2013a, b, UNICEF-CAR, 2013a, b, UNICEF-Guinea, 2013, UNICEF-Mauritania, 2013). However, although at least some had been scheduled or implemented in 2014 (UNICEF-Benin, 2015, UNICEF-CAR, 2015, UNICEF-Ghana, 2015), no results could be traced. However, in Mali high benefits were reported from a separate study on the impacts of CLTS (Box 3)

Box 3 Impact of CLTS on sanitation, hygiene and health in Mali

A separately funded impact study of Mali's CLTS programme showed that access to private latrines was 65% in programme villages and 35% in control villages. Self-reported open defecation rates fell by 70% for women and men, 46% for children aged 5-10 and 50% for children under five. The investigators also saw twice as few cases of human faeces near homesteads in the programme households than in the control village households. Potties for infants were more common in programme families than in control households. Women reported improved privacy and safety. Presence of water at programme latrines was five times higher than elsewhere; for soap this was three times higher and a lid over the latrine hole was two times more frequent. The study found a statistical difference in incidence of respiratory illnesses and a 55% reduction in incidence of child diarrhoea in CLTS villages, as well as better scores for nutritional status of children under five. Source: UNICEF-Mali, 2015.

Benefits to most vulnerable groups.

In CAR, Côte d'Ivoire and Mauritania the focus has been on remote areas of the country. Prioritizing repairs over new hand pumps made it possible to give quick access to safe water in the home villages of the returning refugees. An extra 178 villages will be covered, but the expected population served will be 56% lower, as the villages are half the size of villages in less remote areas. WASH specialists participated in a regional workshop on Monitoring Results for Equity System (MORES) in May 2014 (UNICEF-WCARO, 2015). Although UNICEF reported that it fed MORES data into national plans and evaluation (Table 50), training effects did not yet show in the reviewed programme reporting.

SUSTAINABILITY

Sampling for sustainability checks

One round of sustainability checks (SC) had been carried out in five countries. In CAR no SC was done due to civic unrest, but they will join round 2. Table 33 gives an overview of the sample size for water systems. Sanitation is in Table 37 below. All samples were drawn at random. Benin was not included, as it has no water component. In Guinea, Liberia and Sierra Leone no SCs was done, as they shifted temporarily to Ebola control.

Table 31 Sample size for sustainability checks of water supplies in four WCARO countries

Country	No. sample villages	% of total villages served	No. of IWPs[1)] completed	% in sample	No. sample HHs	% sample	No. of WPCs	% sample
Benin	No water supply component							
CAR	SC under preparation							
C d'Ivoire	26	2%	188	14%	494	0.04%	26	100%
Ghana	18	23%	18	23%	238	no data	18	23%
Mali[1)]	27	31%	27[1)]	100%	375	10/WP	21	63%
M'tania	no data	no data	6 [3)]	100%	not specified	not specified	not yet present	

1) New and rehabilitated 2) no water component 3) plus 3 mini piped systems not sampled; IWP increased to 26 by Sept 2015
Source: AMRAD, 2015, Hydroconseil, 2016, GOG and UNICEF, 2015, MedAconseils, 2015, CDES, 2015.

Financial sustainability

A situation overview is given in Table 34. The degree of information and the quality of the indicators varied greatly. In Côte d'Ivoire the consultants gave a detailed analysis with a good range of indicators (Box 4). In Ghana two sample communities charged regularly. In three income was more than expenditure, but pumps were only one year old. Mauritania only three of the six completed water points with solar pumps had been handed over at the time of study. In five of six villages paying for water services was acceptable (CDES, 2015).

Table 32 Financial sustainability of established water services in sample communities in 4 WCARO countries

Country	WPC has O&M fund	(Regular) charges made	Financial records kept	WPC bank account / secure place	Average amount	Accountability to fee payers
C d'Ivoire	**89%**	**89%**[1)]	33%	6%	no data	44%
Ghana	17%	11%	11%	11%	Direct cost covered	21%

Mali	55%	32% [2)]	no data	no data	no data	no data
M'tania	0%	0%	0%	0%	0%	0%

[1)] Pay periodically or at each collection [2)]68% of HHs said water was free, but 72% said they pay when service breaks down
Source: Source: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015,

Box 4 Financial data from sustainability check in Côte d'Ivoire

In Côte d'Ivoire the women water committees set their own tariffs. Tariffs varied per village, as dis the system of payment: a periodic payment system or at time of collection (Standard charge 10F/bucket and 100F/barrel). Acceptability of water prices was 94%. Nowhere was the price paid based on real costs. The committees had not been trained on what kinds of costs to budget for and what were realistic amounts locally. The country has a history of free repairs by the government until as recently as 2011, and some villages still did not pay the mechanics for repairs made. Of the water point committees that still functioned (63%), 64% did not know the tariff of the pump mechanic and only 9 % knew the costs of spares. 44% had reported to a user assembly, but whether this included a financial report and plans and budget for the next period was not stated (not investigated?). Bookkeeping capacities were very limited: 67% had no cash book and 46% kept no payment records. (Hydroconseil, 2016)

Institutional sustainability

Water point committees were formed programme-wide (although AMRAD does not report the original coverage, only the percentage found a year later), but functionality had dropped greatly (Table 35). The main reason indicated is that NGO contracts are limited to the establishment phase and incorporation of support tasks in local government services such as community development (preferable) or NGOs are yet to be made.

Another reason was training. While at least 12.000 village men and women had been trained (UNICEF WCARO, 2015), the spread and quality were not even. In Côte d'Ivoire for example, 37% had stopped functioning, although most households (72%) knew their committee and 65% knew their roles. The National Coordination Cell for Water point Management master-trained the local NGOs, who trained the 100% female committees. All members got trained once, but duration was cut from 3 days to 1 day and 73% of the trainings were several months before the water supply was installed or repaired. There was no refresher course for when committees changed. All Training materials were either missing or could not be used because of low/no literacy. Training included simple bookkeeping, but was too theoretical and did not take into account that 2/3rd of the treasurers and 1/3rd of the secretaries had never been to school. With a contract for implementation only the NGOs never monitored the effects of the training (Hydroconseil, 2016). In Mauritania 3 points (50%) waited to be handed over; the company maintained those (CDES, 2015). Due to the lack of common definitions other core data was not collected.

Table 33 Institutional sustainability of established water services in sample communities in five WCARO countries

Country	WPC formed	WPC functional	Fully trained	Contact with mechanic	Roles known	Contact with local Gvt
C d'Ivoire	**96%**	63%	65%	70% know mechanic	65%	4%
Ghana	**100%**	54%	no data	37% access (16% to spares)	90%	0%
Mali	no data	63%	no data	65% access to mechanic	no data	no data
M'tania	**100%**	50%	no data	66%	no data	no data

Source: Source: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015,

Environmental sustainability

The only data found was for Côte d'Ivoire. (Table 36). It was limited to the water points; longer term sustainability risks of the water resources was not addressed. Only Ghana reported on 100% sufficient distance to latrines and 100% absence of flooding risks (GoG and UNICEF, 2015).

Table 34 Sustained preservation of environmental hygiene at improved water points in 4 WCARO countries

Country	Drainage present	Soak pit present	No stagnant water	Cattle watering at IWP
C d'Ivoire	no data	no data	68%	no data
Ghana	**100 %**	**100%** "sanitary surroundings"		allowed for drought reasons

Mali	no data	no data	no data	no data
M'tania	no data	no data	no data	no data

Source: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015,

Technical sustainability

The results on functionality are given in Table 37. In Côte d'Ivoire 73% of the 26 sampled points were functional. Seven had not yet been completed. Water quantity and quality are as reported by the users; no measurements have been made. A limitation is the absence of age-specific data (time since handing over).

Table 35 Technical sustainability of improved water supply at community level in 4 WCARO countries

Country	Functionality at visit	Water Quantity (adequate yield)	Water Quality acceptable	Breakdown(s) experienced	Av. Duration
C d'Ivoire	**100%**	**95%**	**90%**	no data	no data
Ghana	**95%**	**95%**	**82%** [3)]		
Mali	**100%**[1)]	**94%**[2)]	no data	**100%** [4)]	77% <1 wk, 5% <1 mnth
M'tania	**100%** [5)]	**100%**	**100%**	0%	not applicable

1) 52% 24 hrs; 37% in day, 1% at night. 2) According to HHs 3) 11 of 18 facilities tested 4) none reported with 0 breakdown. 53% no breakdown in last 6 mnths 5) 3 of 6 not yet handed over but already operational.
Source: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015,

Social sustainability

Table 38 gives the patterns of water use as reported by the sample households. The relatively low use in Côte d'Ivoire (62%) may be associated with the way of household sampling: not drawing from the 'catchment area' of the hand pump, but from the whole village. This could not be checked, because the way of sampling was reported in the inception report only and a copy of this was not on file in DGIS. In Mauritania, almost all households said they used a form of treatment. When available 63% used chlorine; otherwise common bleach, solar disinfection in pet bottles (SODIS) or boiling. Six women cooperatives got chlorine producing devices working on solar energy. Three had broken and the women did not know how to repair them. Reportedly, the old non-solar devices had a better production (CDES, 2015).

Table 36 Degree of use of improved water points by sample households in 4 WCARO countries

Country	Use of improved sources		Continued use of unprotected sources[1)]		
	DW only	All purposes	Other than DW	All purposes	Reported treatment
C d'Ivoire	62%		38%		17%
Ghana	no data		no data		no data
Mali	**90%**		10%		no data
M'tania	**75%**	no data	no data	no data	**93%** [2)]

1) Open sources 2)70% used chlorine when available.
Sources: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015.

Sustainability of sanitation and hygiene

Table 39 gives the sizes of the samples for measuring sanitation and hygiene outcomes. Not all SC reports gave the basis for sampling, so this data was taken from other reports such as UNICEF-WCARO, 2015, which reports data of nine months later. Some samples were therefore larger than reported here. In Mauretania the sample also included all six cooperatives of women chlorine producers for home water treatment. Households here had often helped others to make a latrine (average 72%. but large regional variation) (CDES, 2015).

Table 37 Sample sizes for sustainability checks of household and school sanitation in 5 WCARO countries

	Total ODF villages	No. sample villages	% village sample	No. HH basic san	No. HHs sampled	% sample HH	No. of schools [1)]	% sample schools
Benin	859	150	17%	48.888	379	1%	40	100%

C d'Ivoire	1.261	89	7%	78.735	1.377	2%	Programme delayed	
Ghana	297	168	57%	no data	238	no data	14	100%
Mali[1)]	241	33	14%	39.539	375	1%	30	100%
M'tania	502 [1)]	109	22%	38.654[1)]	750	2%	45[2)]	100%

[1)] Numbers at time of SC and at MTR (Sept 2015) [2)] 20 schools, 25 health centres. Source: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015.

The financial feasibility of climbing the sanitation ladder is given in Table 40. In Benin, no sample HH had yet installed a durable latrine (cost ≥ 100,000 FCFA or EUR 150), while in Mauritania 2/3rd of the households with a toilet had an improved type. However, the researchers did not give the criteria used for scoring (CDES, 2015). Willingness and capacity for improving depended on the availability on the local market of attractive low cost designs and materials and builders trained in their marketing and construction.

Table 38 Financial sustainability of sanitation/sanitation and hygiene promotion at household and commune level

Country	Av. cost/ latrine	Av. cost durable latrine	Av. willingness to invest	Av. income per cap in 2013	Av. cost per HH triggered	Budgeted post for S&H in LG
Benin	38,749	100,000	80, 536	407,258	9,934 / EUR 15	1 per 8 communes[1)]
C d'Ivoire	no data	no data	FCFA 2.500-5.000 [2)]	no data	no data	no data
Ghana	no data	no data	no data	no data	no data	no data
Mali	no data	no data	[3)]	no data	no data	no data
M'tania	no data	no data	no data	no data	no data	no data

1) Bohicon 2) Most mentioned, by 18%. Equals €4-8: 3) 88% reported that they can replace current latrine.
Source: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015.

NGOs had contracts to create local institutional capacity; village committees for sanitation and hygiene were created everywhere. Where sex-specific data was available (Ivory Coast and Mauritania only) volunteers were invariably women. Over time, the number of active committees dropped (**Error! Reference source not found.**). In Côte d'Ivoire 45% of the volunteer committees trained by NGOs said that the training was not sufficient to continue the job. Only 2% knew the government monitoring committee. End 2015 and begin 2016 village leaders therefore got a massive NGO-initiated training on post campaign follow-up. In Mauritania women leaders had been trained in 78% of villages, but the geographic range was 42% to 98%. In Mali, sampled villages still had 3-8 CLTS volunteers at time of study, but no data on if they were still active. As shown in Table 41 volunteers got little or no support after the achieving of ODF. No country had as yet established a scheduled local services support system.

Table 39 Institutional sustainability of CLTS programme at community and local government level

Country	Certified since	S&H c'tees formed	HHs visited	HHs coached	C'tees still active	NGOs support	Commune support
Benin	5 months	**100%**	67%	69%	33%	Ended[1)]	S&H staff get FCFA 60,000/ quarter but only for triggering
Cote d'Ivoire	no data	**99%**	no data	no data	45% lack training	Contract unclear	>25% c'tees unaware who certified. 46% no local ceremony. Village leaders and NGOs recently trained for follow up.
Ghana	Qualitative reporting						Env. Health Assistants visit regularly
Mali	Up to 1 year?	**100%**			no data	no data	22% of communes had no WASH trained health staff
M'tania	Up to 1 year?	**100%**	yes, but no % given		no data	no data	Ministry saw CLTS as temporary campaign

[1)] NGOs no contract for 5 months. Source: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015.

While hard data was missing, large scale CLTS may have several risks for the environment (Table 42). Environmental sustainability can therefore be considered unsatisfactory.

Table 40 Environmental risks from sanitation programme in 5 WCARO countries

Country	Deforestation		Water pollution	Sludge disposal
Benin	High. 20,000 toilets. 70% local wood	Use of other materials for replacement uncertain	At least 11% < 15 m from well	Small. Most latrines covered when full
C d'Ivoire	High. Mostly wood and wattle used	Sanitation marketing of other materials yet to start	no data	no data
Ghana	No data except that all boreholes were minimally 30 m from the nearest latrine			
Mali	no data	no data	no data	no data
M'tania	2/3 in permanent materials	Available from major villages	no data	no data

Source: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015.

Data on the durability of latrines is given in Table 43. This sustainability indicator lacked a consistent definition, so programme findings could not be reported.

Table 41 Technical sustainability of sanitation and hygiene facilities at community level in sample locations

Country	Time since certification	HH has latrine	Traditional type	Durability score [1)]	HW facility	Durability score [2)]	Built but dysfunctional
Benin	5 months	**97%**	67%	60%	67%	49%	no data
C d'Ivoire	no data	**87%**	""most"[3)]	no data	68%	no data	7%
Ghana	no data	no data	no data	no data	no data	no data	no data
Mali	Up to 1 year?	**88**%	no data	**88% capable to replace**	63%	no data	no data
M'tania	Up to 1 year?	74,5%	13%	no data	**83,5%** [4)]	no data	no data

[1)] based on types of material, soil stability etc. [2)] Criteria not given [3)] 81% of toilets met JMP standards of enclosed faeces, covered hole; but mostly non-durable materials [4)] Conflicting data: another table gave 60%; no data on observed presence water/soap
Source: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015.

Table 44Table 44 shows to what extent the ODF status was sustained since certification. ODF was retained nowhere and reported drops were substantial. Non-users were especially small boys and men (Mali) or the elderly (Mauritania). In Côte d'Ivoire no slippage was given for OD certified villages, but of the sample households with no/non-functional latrines (13%) 21% were households that had gone back to open defecation (Hydroconseil, 2016). This amounted to 2.7% of all sample households. In Ghana 39% of sample households in certified villages had not yet stopped OD. Of these 20% actually had a latrine. A major problem was collapse of traditional latrines, but no hard data on slippage was provided (GoG and UNICEF, 2015).

Table 42 Sustainability of improved sanitation: have certified ODF communities remained ODF?

Country	Time since certifi-cation	Human faeces observed in		HH practices OD	OD observed in practice	HHs say others practice OD	% villages 100% ODF	New latrines built since certification	Plan new when filled up
		c'ty	OD sites						
Benin	5 months	no data	35%	2,1%	no data	no data	61%	7%	53%
C d'Ivoire	no data	15%	12%	2,7%	no data	no data	no data [2)]	no data	no data
Ghana	c. one year	no data		39% [1)]	no data	no data	no data	no data	no data
Mali	Up to 1 year?	no data		12%	no data	24%[1)]	**76%**	no data	no data
M'tania	Up to 1 year?	no data		23%	no data	no data	**76%**	no data	no data

[1)] Half of latrines not used. [2)] Triangulation in 2015 revealed numerous biases in ODF declaration. Source: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015.

It was also measured to what degree faecal risks from and around toilets were reduced, including from highly risky infant faeces (Table 45Table 45). Measurement was found to be smarter than in ESARO. The set of indicators was more complete and definitions and ways of measurement were more objective. However,

conclusions on impact cannot be drawn with confidence, because no baseline studies were found and there were no control groups. In Côte d'Ivoire the researchers defined "clean latrines" objectively by "no bad odour" and/or "no faecal stains", although technically it would have been better to score each characteristic separately. Toilet use was also triangulated by asking about actual use of the previous day (same result: 97%). The focus in Ghana was on scoring factors changing behaviour, rather than which behaviours. In Mauritania CDES (2015) adopted even six indicators for when an observed latrine would be scored as clean, but did not report results by household. Instead all data is lumped under percentage sample *villages* where 'latrines were 'well-managed' and 'hygienic' (77% and 82% respectively).

Table 43 Achievement of latrine use and hygiene in sample households in 5 supported WCARO countries

Country	% HH visited	Own latrine & use (adults)	Child faeces in latrine [1)]	No fecal soiling	All 6 criteria toilet hygiene	Easy to clean [2)]	HW facility observed		
							present	with water	with soap
Benin	2%	**97%**	**90%**	**82%**	27%	no data	**67%**	**68%**	55%/ **82%**[3)]
C d'Ivoire	2%	**87%**	**95%**	63% [4)]	no data	49%	**68%**	no data	66%
Ghana	238[5)]	20% [6)]	no data	no data	no data	no data	31%		
Mali	2%	**88%**	**92%**	no data	63% 2 of 6	no data	**95%**	95% of 'communities'	
M'tania	c. 2%	**77%**	No household level data reported			69%	**84%**	**84%**	**84%**

[1)] In HHs with infants [2)] Slab can be cleaned with water and soap/detergent [3)]82% observed at latrine [4)] Score not valid as combines two criteria: no soiling & no bad smell [5)]No total no. of HHs given so no % could be calculated [6)]Range/district 11%-44%
Sources: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015.

Outcomes for handwashing practice are reported in Table 46. They show that a short campaign was not enough and promotion in and by villages, and their support, needed to go on. Scoring the levels of performance was impossible (too few statistics) and also irrelevant, because of several rigor issues: (1) reporting only frequency (Mali) was incomplete, (2) over- reporting was likely as answers may measure good knowledge rather than good practice, (3) data was not cross-checked against observed facilities, water and soap (Table 45), and (4) men may underreport food- and child-related hygiene practices. In Benin and Mali half of respondents were men, in Côte d'Ivoire, Ghana and Mauritania sex of respondents was not stated. CAR was not included because due to civic unrest a pilot CLTS project including handwashing with soap began only in 2015 (UNICEF-WCARO, 2015).

Table 44 Reported handwashing practice by male or female respondents in sample households in 5 WCARO countries

Country	Before preparing food	After defecation	After cleaning child's bottom	Before feeding child
Benin	no data	no data	no data	no data
C d'Ivoire	100% of sample HH able to mention at least 1 critical moment; 34% demonstrated inadequate practice			
Ghana	no data	no data	no data	no data
Mali	SC: 64% of respondents (> 50% men) said HH washes hands > 3x day			
M'tania	no data	no data	no data	no data

Source: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015.

Home treatment to sustain water safety was also promoted (Table 47). After a 55% timespan, 15% of home treatment targets had been reached. Mali was the exception with 67% of its target met (UNICEF, 2015). A limitation was that the means by which the outcomes were verified have not been reported. Sample studies in Benin and Côte d'Ivoire were in line with the overall low results. In Mali practice was over twice as high (34%), but still considerably less than the 67% reported, so actual practice may have been overrated.

Table 45 Reported and observed water safety chain in sample households in 5 WCARO countries

Country	At collection		Storage at Home			Treatment		Drawing
	Washed with soap	Closed vessel [1)]	Covered vessel	Separate for DW	Washed before refill	Before storage	As recom-mended	By ladle kept on top

Benin	57%	25%	73%	64%	58%	15%[2)]	13%-37%[3)]	37%
C d'Ivoire	no data					17% [4)]	no data	
Ghana	No quantitative data in report							
Mali	no data					34%	no data	
M'tania	no data					93%	no data	

[1)] Mainly jerry cans [2)] 88% by tablets [3)] Frequency and dosage 4) Only asked for water collected from unsafe, (non-programme source. Source: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015.

In schools (Table 48) water supply (not in the programme, although needed for toilet and hand hygiene) scored 96% in Mali and 10% in Mauretania (rest collected by carts). In Benin 30% of toilets and 37% of handwashing facilities had defects. The government has now made resources available for ministerial inspection missions (MedAconseils, 2015). In Ghana, 8 of the 14 schools served already had latrines, one got them and five had none and students practiced OD (GoG and UNICEF, 2015). In Mali, 42% of the toilets were not in use. They had not yet been handed over or the head kept them locked, the key was lost, or they were too risky to use, or due to school holidays (11%).

Table 46 Sustainability findings on WASH in school in 5 WCARO countries

Country	% sample (now completed)	Functional water supply	Toilets present	Separate for girls	Toilets functional	HW facility present	HW facility Functional	HW facility with soap
Benin	78%	no data	**100%**	no data	70%	**90%**	65%	37%
C d'Ivoire	School WASH yet to start							
Ghana	14 schools[1)]	**93%**	29%	no data	no data	36%	no data	36%
Mali	23%	**96%**	**100%**	**87%**	**86%**	53%	32%	32%
M'tania	50%	10%	**100%**	**100%**	**96%**	40%?	40%	40%

[1)] 13 water supply, 1 sanitation. Sources: AMRAD, 2015, Hydroconseil, 2016, Kinjaj Consulting, 2016, MedAconseils, 2015, CDES, 2015.

Health posts (all 25) were only evaluated in Mauritania. All had lockable toilets and handwashing facilities with soap; women volunteers kept them clean; 30% had a working water connection. One toilet block was also use by the village, but also there hygiene conditions were reasonable (CDES, 2015)

The summary of the sustainability results in terms of OECD standards are given in Table 49. It should be noted that the Ghana report was missing from the DGIS files and that all data was from the first SC only, some 1-2 years after field implementation started. There is thus still room for the specific improvements given below.

Table 47 Summary of sustainability scores of four countries in WCARO region

Financial	All indicators highly unsatisfactory except for presence O&M fund and raising contributions regularly in Côte d'Ivoire. Bookkeeping and financial accountability to paying households highly unsatisfactory or no data. Only Benin had data on latrine cost as spent and for durable model, willingness and capacity to pay, unit cost of promotion, district budget for sustained campaign.
Institutional, community	For water and sanitation only local committee formation highly satisfactory. Sustained functioning of village committees, training and district support capacity unsatisfactory or data missing. In Côte d'Ivoire follow up training of NGOs and village leaders now started.
Environmental	Only addressed in Côte d'Ivoire and Ghana for water drainage (satisfactory). For sanitation 11% of pit latrines too close to wells, except for Ghana where all sampled bore holes were at c. 1 km from village. No hard data on environmentally safe sludge management and climate change resilience.
Water Technical	Functionality, quantity and quality of water highly satisfactory (no quality data in Mali). except for duration of breakdowns (no data or no data for % repair within 2 days as people may then have to use unprotected sources or walk far to a protected source).
Sanitation and Hygiene	Results on formation and first year sustainability of village sanitation promotion committees highly satisfactory as is access to own latrine, except for Ghana. Only in Mali very satisfactory reported capacity to replace filled up latrines, no data elsewhere. Sustained ODF just still satisfactory by OECD criteria in 2 countries and unsatisfactory in 1 one year or less after ODF declaration. Only in Benin valid data on hygiene (very satisfactory). Observed handwashing provision *with* water *and* soap very satisfactory in Mauritania only. Drinking water safety chain in home either yet unsatisfactory or no data.

WASH in schools	Presence of toilets highly satisfactory in three of four countries; water supply and separate latrines for girls in two countries. No sustainable provisions for supply of soap/ water and soap mixture/ash.

Source: this study

STRENGTHENING THE ENABLING ENVIRONMENT

National policy and programmes

UNICEF introduced the CLTS approach in 2008 (UNICEF, 2014a). In 2013/14 all five countries had adopted CLTS as their national strategy. Protocols for implementing and for verification and certification are now also in place (UNICEF-WCARO, 2015). Also new was the introduction of water treatment and safe storage in the homes. The new CLTS behavioural package in WCARO consisted of the three top (most effective) practices for better health: (1) ODF and then climb the toilet ladder, (2) handwashing with soap/ash at the most critical occasions and (3) a safe water management chain at home.

Also new was the Sustainability Pact. UNICEF agreed with the responsibly ministries in all original 9 countries except for Liberia (still in process) to preserve the program results for the next ten years. So far six countries had developed Compact Action Plans to follow up the commitments (UNICEF-WCARO, 2015). Quantitative progress is given in Table 50. Based on % targets met, the score for strengthening the enabling environment was highly satisfactory for the first two, satisfactory for nos. 5 and 7 and not satisfactory for the other four.

Table 48 Degree to which country-specific indicators for sector strengthening had been met, September 2015

Indicators for sector strengthening	Sector coordin-ation in place	WASH indicators monitored yearly; JSR done	Nat WASH policy/ strategy developed	Schools analysed and invest case made	Technical WASH norms and standards developed	Knowledge Mgt carried out	Nat Plan for Results Initiative conducted	WASH BAT MORES data fed into national plan/ evaluation
Original targets (no. of countries)	5	6	14	3	4	3	4	5
Met sept 2015 (55% time)	5	6	7	2	3	2	3	3
% met	**100%**	**100%**	50%	67%	**75%**	67%	**75%**	60%

Source: UNICEF-WCARO, 2015

Other achievements included (unless otherwise stated based on WCARO, c. 2015 and UNICEF, 2015):

- *Benin*: The CLTS approach became part of the national rural sanitation and hygiene strategy and was under implementation in 50% of the country. The budget for water was increased by 35% and for sanitation by 100%. A special sanitation and hygiene fund was created in 2015 and commune funds increased from 147 million in 2012 to 900 million in 2014 and of field staff from 140 to 180 (MedAconseils, 2015).
- *CAR:* Development of technical norms and standards for water supply,
- *Ghana*: Development of a strategy for safe water in the homes and for engaging the private sector in sanitation; certification standards for handwashing facilities for the private sector. Increased finance for improving WASH delivery and management earmarked in the budget for 2016. Establishment of Sector Information Systems is far advanced. Compliance of legislative instrument on the set-up of District Works Departments (DWDs) not yet adequate Sustainability check linked to Ghanaian standards and UNICEF's Monitoring Results for Equity Systems (MoRES) and Bottleneck Analysis Tool (BAT), with traffic lights on progress (Ghana, Republic of, 2016; Ghana, Republic of, and UNICEF, 2016). Data was presumably collected independently by Kinjaj Consulting, but the outcomes were published in 2016 as an authorised government report.
- *Guinea*: The government allocated USD 1.1 million from the National Development Budget to the programme and started disbursement.

- *Côte d'Ivoire.* The government allocated funds for transport and operating costs to enable national and regional departments to coordinate and monitor the programme in the field. Five ministries signed the Sustainability Pact. Absence of a WASH policy (in progress since 2012) and division of tasks hamper integration at national level (Hydroconseil, 2016)
- *Mali* pledged to increase its WASH budget by 5% and make the sanitation budget 0.2% of the GDP, scale up CLTS and expand the sustainability compact. UNICEF supported the National Sanitation Directorate to integrate hygiene in CLTS and to prepare a nation-wide action plan and post-certification strategy.
- *Mauritania* held a joint consultation of three donors and UNICEF. This resulted in adopting the same CLTS policy and strategy in all field programmes. It also levered funds for a national ODF status by 2020. UNICEF also assisted with the national hygiene promotion strategy.

Donors and NGOs

In Benin the European Union and the Global Fund have allocated funds to CLTS (WCARO, c. 2015). In Mauritania the French Development Agency, the European Union and the African Development Bank now also support CLTS (CDES, 2015). In Côte d'Ivoire EU funding has been allocated to scale up CLTS to areas not served under UNICEF WASH (UNICEF-WCARO, 2015). In Mali the National Water Directorate and UNICEF have mobilized the support from GTZ (Germany) and SIDA (Sweden) to carry out a nation-wide inventory of water point functionality with the help of the real time monitoring instrument.

National NGOs were involved in research (SCs and other studies) and promote sanitation and hygiene. Côte d'Ivoire did not use national NGOs, but trained local female and male leaders to promote ODF, toilets and hygiene. International NGOs involved were:

- AKVO (NL) in cooperation with Water Point Data Exchange for real time monitoring of water service functionality in all five countries;
- Practica (NL) and Rural Water Supply Network for manual drilling training and quality assurance;
- Stockholm International Water Institute (SIWI) for sustainability and accountability assessment;
- IRC (NL) and Aguaconsult (UK): country and WCARO SC assessments, Knowledge Management (2 products, 1 learning event);
- Cordaid for WASH in schools and clinics in CAR (UNICEF pro rep 2014);
- SNV for training in Rwanda (SNV, 2012).

UNICEF's fund utilisation report stated that 16% of the funds received during the first two years went to contractual services with the private sector. For partnerships with NGOs UNICEF used PCAs (Programme Cooperation Agreements). No information could be found on the overhead costs (see also under *Comparison of different financing channels*). The costs of UNICEF's regional office and headquarters were respectively 2% and 1% of the total programmable funds (UNICEF-WCARO, 2015). UNICEF also deducted 7% for its general functions, as per the standard for all external programme support.

Private sector

For water supply the programme trained manual well drillers and trained and equipped local hand pump mechanics for maintenance and repairs. Benin was developing a certificate for trained mechanics. In Côte d'Ivoire some local technical hydrological directorates took a number onto their staff. A full-fledged national support system for community managed water services remained under development since 2012 (Hydroconseil, 2016). Developing the model for sanitation marketing (low-cost toilet designs also took longer than expected. Model development and training for enterprises who will also sell materials for more durable sanitary toilets and provide other services, e.g. credit, were going on. UNICEF agreed with the sanitation NGOs and the private sector institutions to postpone the roll-out to 2015 (UNICEF-WCARO, 2015).

Community participation

For water supply hardly any information was found on participation processes during installation. Data on sustainability show however that institutionally and financially village operation, maintenance and

management (VLOM) was not yet adequately working. Equitable participation and capacity building of women and men, and reporting of progress, was not developed, as were sufficient budget and content capacity of local services to build and sustain the capacity of the villages post-construction.

More recently private sector service delivery services emerged as alternative model for testing. The French hand pump manufacturer Vergnet Hydro for example proposed that if external financers pay EUR 1,000 more (10%), the company will double that amount and carry out pump maintenance and repair for 15 years (DME, personal communication). Burkina Faso and DRC in WCAR and in ESAR in Kenya are also working on rural boreholes management via a private sector service provider as part of DFID-supported programmes (Kelly-Ann Naylor, pers. com.).

More information was available for sanitation, where local leaders and local women participated in situation analysis and community action triggering. Women reportedly benefitted from process and results (see also the external evaluation of UNICEF sanitation under Global Activities). However, hard evidence was missing except in Benin, where 57% of sample households had encouraged or helped neighbours to build a latrine (MedAconseils, 2015). Also missing was data on whether *men* were addressed and took up their marital duties and family responsibilities, especially for financing and improving their own hygiene behaviours, and in supporting the women in the WASH committees.

Empowering communities for continued water service management and post-triggering CLTS had yet to work (see also Institutional Sustainability above). Some factors were: (1) limited time for NGO (8 months per village), (2) a focus on immediate results, (3) insufficient capacity building of local committees, (3) no longer term support (NGO contracts ended after 8 months) and (4) no structured involvement of local government staff during the programme and afterwards. In Côte d'Ivoire, the capacities of the new cell responsible for training of trainers (ToT) to train the village water committees had not been built, resulting in an unsuitable training approach and materials for the 100% female committees, with many members with no or low literacy (Hydroconseil, 2015).

Governance

Contrary to decentralization, UNICEF partnerships and sustainability pacts are only with the central governments. This while in Benin UNICEF itself (for health), and the World Bank, have formed partnerships with local government (MedAconseils, 2015).

Partnerships

In Benin other donors adopted the same approach: GiZ, Helvetas, the local development bank Societé Gėnėral Bėnin (SGB) and the Belgian NGO Protos (MedAconseils, 2015). Outside the programme areas a few NGOs still undermine the national strategy by offering subsidies. Local adjustment and harmonization have yet to take place. Also, joint sector reviews have started. NGOs in Benin got short UNICEF contracts. Renewal is subject to reaching physical targets within given time and budget. The NGOs involved local government and during their contracts paid incentives to local sanitation and hygiene staff.

Public accountability

No data was found.

Resources and market development

As mentioned above, several governments allocated more resources to WASH. Benin increased its rural water budget by 35% and doubled its sanitation budget. Côte d'Ivoire added funds for field monitoring. Mali will increase the WASH budget by 5% and make the sanitation budget 0.2% of the GDP. Market development for sanitation was yet to start. A national strategy for private sector engagement was under development in Ghana with UNICEF support. First efforts were made for a market approach to affordable durable toilets

(UNICEF-WCARO, 2014). A pilot empowering women to sell self-produced chlorine has not yet been successful due to lack of technical training for maintenance and repairs (Table 36).

CROSS CUTTING ISSUE: GENDER

In all SC studies, except in Côte d'Ivoire and Mauritania (no information) the respondents were both women and men, but mostly the findings were not analysed accordingly, except for Benin. Here the researchers investigated and reported latrine use by different groups of HH members, but also no separate for males and females (MedAconseils, 2015). Where reported (Benin, Mauritania), the interviewers were all men irrespective of whom they interviewed. None of the reports of UNICEF and researchers gave sex-disaggregated data for the persons involved/trained/interviewed, unless they were 100% women: village water committees in Côte d'Ivoire and chlorine production groups in Mauritania.

A summary of the few available gender statistics is presented in Table 51. The 100% female water committees in Côte d'Ivoire were a shift from the previously 100% male committees started in a World Bank programme in the late 1990s. The researchers noted that the shift was not accompanied by sensibilisation of the men and that these resented that they were now excluded (Hydroconseil, 2016). Women were also the ones who supported CLTS as volunteers in Côte d'Ivoire, Mali and Mauritania. Male roles were not discussed.

Table 49 Summary of gender balance reported in sustainability studies in 8 WCARO countries

Country	Committees 50% women	% female and male facilitators	
		Average	Range
Benin	95%[1)]	42% / 58%	25% / 75% - 63% / 37% [2)]
C d'Ivoire	100% female	No data	
Ghana	Rule min. 30% women. Actual 20%-30% / c'tee	No data	
Mali	No data	No data	
M'tania	All volunteers were women	100% female staff from Ministry of Social Affairs, Children and Families	

[1)] "Equitable", not quantitatively defined [2)] NGOs ALDIPE & PLAN 25% women, SNV 42%, CERIDE 44%, EAA 50%, AERAMER 63%

EFFICIENCY

Costs and resources.

At the Mid Term Review (MTR) and Addendum (March 2016), the following net changes in outputs/outcome targets were proposed without change to DGIS funding (UNICEF, 2015, 2016):

Water points	-3.8% new, +4% repaired/new boreholes
No. of new users	-8.4%
Total no. of water users	-13.7%
HH with home water treatment	+0.9%
No. of new users sanitation	-1.8%
No. of new latrine users in schools & clinics	+39.7%

The main reason was that the target of 300 manually drilled wells in Ivory Coast, which were cheap and quick to build, had to be reduced to 60, because they suffered from high failure (52%) due mainly to geological constraints, a lack of local implementation capacity and the associated higher support costs of INGO Practica. Lower targets for new water users WASH in schools were explained by going for the most disadvantaged areas in Mali and Mauretania, with smaller villages and schools and higher costs of construction (transport, implementers from outside, etc.). The reductions were partly compensated by a raised target for home water treatment. Institutional targets were for latrines, but finding that many schools lacked water for drinking, sanitation and hygiene (including menstrual hygiene) the number of institutions was lowered to allow more schools (72.8%) and clinics (94.8%) to get new or rehabilitated water points (Kelly Ann Naylor, pers. com). In 2016 the targets changed again when Liberia, Guinea and Sierra Leone had re-joined the programme after combatting the Ebola crisis, but these fell outside the scope of this study.

To meet the higher cost, the regional budget was increased by 1.12%, financed as follows: DGIS 68,33% (unchanged), UNICEF 13,20% (+3,13%), country governments 6,29% (-5.17%) and communities/local government 12,18% (+8.76%). The reason for the latter shift was the problem to mobilise funds at national level. So far Côte d'Ivoire allocated 65m FCFA for transport of the regional directorates to supervise the programme and Guinea allocated $1.1 million for the drilling of additional water supply boreholes in the programme area. Mauritania began exploring the option to sign a convention for fund disbursement through the public finance system.

Nevertheless, most countries' technical bodies contributed more than expected in term of staffing, logistics, per diem for field supervision, meetings, etc., but these were not formally calculated and thus are not well captured in the financial reports. The same also goes for cash contributions and in-kind support from communities and households.

Some data were also given on performance related budget lines like gender ("empowering women", "menstrual hygiene management in schools") and knowledge managements (UNICEF-WCARO, 2014, Annex C). However, no consistent system of performance related accounts was encountered.

No data on unit costs for water points was found except for Mauretania. Here, manual drilling and a Spanish-designed low-cost solar pump to pump the water into a small overhead storage tank with several taps underneath has lowered the unit costs from USD 113/person to USD 30-40/person, a cost reduction over the existing technology of 27%-35%,cap (UNICEF-WCARO, 2015). For the others no unit cost data have been reported. Unit costs for promoting sanitation and hygiene were only reported in Benin. Average costs were EUR 17 per household. They were for promotion only. Under CLTS, the households pay all costs of latrines, home water treatment and handwashing provisions themselves.

Time and budget

As mentioned under the section 'Donors' above, eight new donor support initiatives support UNICEF WASH. However all are at country level and all but one (which is for monitoring of water point functionality) address only sanitation. DGIS remained the only supporter of the full WASH package region wide, and data reported in this study can be attributed to the DGIS-UNICEF-Government cooperation. Financially, the programme is mostly on track. At 55% of time spent country expenditures have ranged from 41% to 58% (Table 52). Table 28 and Table 29 already showed the comparative performance. So far, Côte d'Ivoire had the greatest progress: at 55% of the time spent three targets were achieved equally to or well above 55%. On the other hand, progress was slow on new water supply and was absent for home water safety, because the country prioritised sanitation, while Mali, moved steadily forward on all programme components without reaching any 55%.

Table 50 Summary overview of expenditures in WCARO WASH programme until Dec 2014

Country	DGIS allocation	% share	% expended
Benin	5.591.280	9%	52%
CAR	8.505.000	13%	50%
C d'Ivoire	11.214.953	17%	58%
Ghana	11.728.884	18%	43%
Mali	10.220.000	16%	41%
M'tania	9.863.000	15%	42%
WASH Reg. WCARO	1.937.749	3%	56%
Total	65.493.168	100%	53%

Source: UNICEF-ESARO, 2015

Sanitation and hygiene. Table 53 shows that sanitation and hygiene got the largest share, followed by water supply. Earlier it was found that region-wise sanitation and hygiene were on track, except for CAR, where

remote villages with returning refugees got priority for water supply, and Mali (Table 29). Two countries proposed adjusted targets: Benin + 33%, CAR -50% to -75%. Region-wide this meant a 25% lower target.

Table 51 Summary overview of DGIS funding in WCARO WASH programme by subject area

Result area	Revised budget	% share
Water supply	13.845.395	23%
HWT	310.000	1%
San & Hyg	16.232.118	27%
WASH in schools/clinics	9.826.267	17%
Enabling Environment	5.897.551	10%
Mon & Eva	2.146.700	4%
Programme Support	8.864.886	15%
WASH HQ	841.122	1%
Regional Office	1.096.628	2%
Total programmable funds [1)]	59.060.667	100%

[1)] 7% of all programme funds went standardly to the general income (core funds or RR) of the UNICEF organisation

Water supply. The second largest component lagged behind. The main reason was the introduction of manual well drilling. This was c. 60% cheaper than the mechanical drilling in East and Southern Africa. However, delays were caused by the extra training time and extra technical advice for proper well siting from SKAT, a Swiss-based technical NGO and the University of Milan. Low results in Ghana (Table 28) were due to the time needed for agreement on the sustainability pact by all government stakeholders (GoG and UNICEF, 2015)

WASH in schools and health centres. This component was slow to start (see Table 29 above). Reasons given were contract delays (Benin), a 150% cost increase due to changed exchange rates requiring the introduction of less expensive technologies (Ghana) and the decisions of UNICEF in Côte d'Ivoire to start this component after the villages have become ODF (UNICEF-WCARO, 2015). Four countries (Benin, Côte d'Ivoire, Ghana and Mauretania) therefore proposed to reduce their school targets by between 23% and 100% and also reduce their health centre targets. Reasons given were: (1) the integrated approach to WASH in schools slowed progress (Côte d'Ivoire, Ghana) and (2) priority to schools in remote villages (Mauretania). In Benin, a joint government/UNICEF field visit found that most institutions already have latrines, so less toilets needed to be built. Hence the focus was shifted to maintenance. On the other hand, Mali raised its schools target by 67%. The net regional change was therefore −3 %(UNICEF-WCARO, 2015).

Because the WCARO programme was mid-way in 2015, data on operational costs were more limited than for ESARO. In the Mid Term Review the emphasis was on lowering water output targets by 17% (in CAR, Côte d'Ivoire and Ghana) and increasing targets for repairs by 16%, without changing the budgets. Reasons were (1) a high number of non-functional WPs (CAR), (2) limitations for manual drilling in Côte d'Ivoire (52% unsuccessful drills during pilot) and (3) higher than planned costs for the Dutch NGO to build local capacity for manual drilling. The target population was downsized by ca. 80,000 people, of whom half in Mauritania. The programme here gave priority to remote and poor villages and these have a lower average number of inhabitants (250 instead of 500), so fewer people got access. While water targets were sized down, the amount of financing remained unchanged. Since repairs are less costly than new construction, the unit costs per person served will go up, but exact data will only be available at the end of the programme.

APPLICATION AND LEARNING

Effective monitoring and Results Based Management
The following system served to monitor and evaluate implementation and sustainability of results:

- Baseline studies. Baseline studies were planned in all countries, but no reports were found in the DGIS data base nor made available by UNICEF.
- Results-based Progress Monitoring: implementation process through routine data collection (ongoing) and for key results indicators (twice per year)
- Sustainability Checks (SC). The SC is a new instrument that DGIS introduced first in the ESARO programme. In WCARO, SCs were linked to Sustainability Pacts between the national governments and UNICEF. Independent national or regional consultants measured the continued functionality of the established facilities, services, institutions and behaviours in a representative sample of programme locations. After government consultations, UNICEF organised signed government management responses from the respective ministries. DGIS responds with its own response (**Error! Reference source not found.**). The second round of SGs was planned for 2016. The countries and UNICEF agreed to continue SCs for 10 years after completion of the infrastructural works. The UK consultant Aguaconsult continued to review the SC reports from WCARO for quality assurance (Boulenouar et al., not dated and Boulenouar, 2016).
- Real-time service monitoring. The Dutch knowledge NGO AKVO trained local NGOs in Benin, Mali, Côte d'Ivoire and Mauritania to monitor real time water service delivery on smart phones and enter the data into a data (the FLOW method). IRC cooperated in assessing the monitoring systems.
- Joint Sector Reviews (JSR) and Mid-Term Reviews (MTR). All six countries organised annual JSRs led by the line ministry and UNICEF, with participation from all WASH actors, including donors, as well as MTRs. In the programme-wide MTR (UNICEF-WCARO, 2015) a log frame covered the qualitative results of the work by the regional and global UNICEF offices. This work included knowledge management and networking, innovations, technical support to countries, regional and global coordination, partnership strengthening and overall programme monitoring. The framework gave the agreed outputs/outcomes along with the objectively verifiable indicators and the means of verification. Quantitative output and outcome targets were however reported as statistics only, without objectively verifiable indicators and means of verification.
- Impact evaluation. UNICEF Mali conducted an impact evaluation of CLTS on its own accord and shared its results with the programme partners. This reinforced the trust of the other governments in the approach (UNICEF-WCARO, 2015). A detailed programme impact evaluation will be done in one country (Côte d'Ivoire). The ToR was prepared and a second call for proposals was out until 1.11.2015. No information on the current status was found. UNICEF New York further carried out a comparative evaluation of the CLTS strategy and programmes (UNICEF, 2014a). This covered five countries, including Mauritania, Mozambique and Sierra Leone. It was one of the evaluations used for this sub-study.

In WCARO the mid-term review took place after 33 months. As reported under *efficiency* (time and budget), this brought several governments to revise their targets upward or downward. Also indicators for outputs and outcomes were harmonised for the five results areas: water, sanitation, WASH in institutions, hygiene and enabling environment.

Integration of sustainability monitoring in national systems progressed. In Benin, Mali and Mauretania the governments took up real time monitoring as sector-wide system (UNICEF-WCARO, 2015) and UNICEF WCARO expanded SC use to its programme with Niger. Harmonisation of indicators will be part of the 2016 Sustainability Framework orientations, which will include a set of standardised core indicators which all countries will use and then a set of factors will provide a menu of choices for countries to look at particular areas of interest. The goal is to create "simple, cost-effective, and useful" exercises that can stimulate learning and dialogue on sustainability at country level (Kelly Ann Naylor, pers. com).

Reporting

Progress and sustainability

Table 54**Error! Reference source not found.** gives the reporting from UNICEF to DGIS. Management responses could not be filed in the 'pyramid', the electronic monitoring system of DGIS, because this system

has space for only one other report per country per year. Hence IGG requested in a memo of 29.1.2016 to allow manual registration in a spreadsheet. This explained why initially only responses from Benin, Mali and Mauritania could be found. Upon request UNICEF WCARO then sent copies of the other responses as well as the inception reports. In this way it could be established that the reporting itself was as agreed between UNICEF, the national partners and IGG. Actions that followed the reports are summarised under Management Responses below.

Table 52 Status on reporting, Sustainability Compact and Sustainability Checks in 6 WCARO countries

Region	Year/Country		Benin	CAR	C d'Ivoire	Ghana	Mali	M'tania
WCARO 2013-2017	UNICEF Country Progress Reports	2013	Inception Phase reports)					
		2014	X	X	X	X	X	X
		2015	X	X	X	X	X	X
	UNICEF Regional Progress Report	2013	(Inception Phase reports)					
		2014	X					
		2015	X Annual report (30.06.2016) and Mid Term Review report					
	Sustainability Compact	Signed	X	X	X	X	X	X
		Action Plan	X	On hold	X [1)]	X	X	X
	Sustainability Check Report	2015	Aug 2015	ToR in prep	March 2016	March 2016	July 2015	Dec 2015
	UNICEF & Nat Gvt Management Response	2015	30 Oct 2015	n.a.	29 Aug 2016	8 & 21 Sept 2016	20 Nov 2015	28 Dec 2015
	DGIS Management Response	2015	–	n.a.	19 Sept 2016	19 Sept 2016	–	–

1) Update 10.8.2016 Source: UNICEF WCARO, 2015 and this study. n.a. = not applicable (postponed due to CAR internal conflict)

Management Responses

Management responses generally focused on immediate issues. Agreements on structural changes also occurred, but were less usual:

- In Mali and Mauritania national inventories were started on water point functionality and a start was made with feeding SC data into national water point monitoring. Both countries began to develop strategies for sustaining ODF, with Mali now piloting implementation.
- Benin and Ivory Cast set up and financed a committee for the hygiene and sanitation sector, meeting twice a year. Benin also co-financed and began real-time functionality monitoring and financed an annual review mission.
- Ghana completed a technical assessment for better support to sustained village and is undertaking a sanitation marketing strategy and is considering mini-schemes for better access and adopted UNICEF and WHO developed WASH in schools minimum standards and guidelines.
- Ivory Coast developed and diffused s strategy for the institutional aspects of sustained water services in rural areas and began the update of its rural water services data base.

Effectiveness and sustainability

In 2014 the United Nations Economic and Social Council adopted the global commitments of UNICEF for measurable outputs and outcomes in seven subject fields (health, HIV/AIDS, WASH, nutrition, education, child protection and social inclusion) and in organisational efficiency and effectiveness (United Nations, 2013b). The results in the two regional programmes are here seen in the context of these global results and indicators. The WASH outcome for UNICEF's strategic plan 2014-2017 is "improved and equitable access to and use of safe drinking water, adequate sanitation and good hygiene practices and promotion of healthy environments" (Annex 1) (United Nations, 2013b, 2014). Table 55 shows how the Netherland's assisted UNICEF programmes in ESARO and WCARO regions have contributed to this outcome and its intended outputs. Important to note is that the ESARO programme was still formulated under UNICEF's preceding

strategic four-year plan. This explains why for example the currently pursued water safety plans were not part of the ESARO programme.

Table 53 UNICEF's intended global WASH outcomes and outputs and ESARO/WCARO results with Dutch assistance

Outcome: improved and equitable access to and use of safe drinking water, adequate sanitation and good hygiene practices and promotion of healthy environments	
Global indicators	ESARO and WCARO performance
Increased % sustainable access to and use of safe water	Substantial increase but % contribution to country growth not reported
	Progress on sustainability esp. technical; Other four criteria need more time, more/better inputs
Increased % sustainable access to and use of adequate sanitation	Substantial increase but % contribution to country growth not reported
	Mostly traditional latrines. Isolation faeces from environment not yet consistently and fully measured. ODF high initial outcomes but considerable slippage almost everywhere.
Increased % sustainable access to and use of handwashing facilities	Not all baseline data [1)] and not clear if part of national household surveys in programme countries
	Indicators & measurement (facility works, has water and soap) not yet adopted programme-wide
Increased % schools and clinics with WASH of national standards	Substantial increase but % contribution to country growth not reported
	Not yet everywhere functional water, sanitation and HW facilities; Girls virtually always separate
Demonstrated progress towards reducing inequalities in access	In general priority to worse-off areas but no hard statistics in reports
	In WCARO more progress on sanitation which reduces the gap with water supply access
National san budget ≥ 0.5% GDP	In WCARO some countries increased san funding; no GDP proportion reported.
Nat. WASH strategy implementation on track	Indicators not stated. No link with national policy indicators and reporting in ESARO and WCARO.

[1)] Baseline surveys have been started "in some countries" (UNICEF WCARO Inception Phase Report, p. 8)

The outcome indicators were supported by a long list of output indicators. Some of them were well-defined, but not yet incorporated in the regions, e.g. "People using safe drinking water from a source with a total round-trip collection time of 30 minutes or less including queuing" (p. 12). For "proportion of water supply systems providing sustainable service" however, sustainability was not defined. The Netherlands initiated sustainability checks provided a reference here, although common indicators in a simpler check remain to be set.[15] The large data load was also in consequence of the demand from UNICEF country offices for more, and often very specific information, which weakened usefulness at programme level and also the potential for integration in national monitoring. Demonstrated progress towards reducing inequalities in access and "disaggregated WASH data by sex, rural/urban poor [and] disabilities" (p.13) were met insufficiently.

Other effects from cooperation with the Netherlands were the use of WASH expertise in specific areas of UNICEF demand (manual drilling, real-live monitoring), crisis finance response (Ebola fund diversion, with an extra EUR 20m allocated to realise the original WASH targets) and the enhancement of joint donor actions, e.g. a joint evaluation with DFID in Sierra Leone and the preliminary work to establish a multi-year, multi-donor UNICEF WASH cooperation programme with one UNICEF monitoring system and annual report.

The independent evaluation of the WASH programme of the Department for International Development in the United Kingdom by the Independent Commission for Aid Impact reported that 60% of the programme was implemented by UNICEF. The evaluators noted that most programmes were too short (3-5 years) to achieve sustainability. Evidence of positive impacts came from Nigeria on infant diarrhoea reduction, school attendance and WASH related work loads of women, but such data was not collected structurally. DFID should measure access and impacts for the most disadvantaged groups and for wider development and also sustainability. "For example, the Dutch Development Agency and USAID now use sustainability checks for up to ten years after programme completion"(p. ii and p. 23). Individual UNICEF programmes showed good value for money, i.e. achieving the desired results at a low cost, with evidence of good quality and sustainability. However, as UNICEF programmes in the UK are not tendered, it was also advised to find other ways of

[15] WCARO developed a guidance note for country dialogues on how to transition from a project-driven approach to a sector approach, where national M&E systems include monitoring of functionality and checks can be anchored in national planning and review processes such as JSR. In addition, IGG provided a top-up grant to UNICEF for Accelerating national and subnational WASH monitoring for improved asset management and service delivery in cooperation with UNICEF and AKVO. This is setting up the groundwork by assessing, costing and developing new tools and capacities for strengthening the national M&E systems (Kelly Ann Naylor, pers. com.).

comparing value for money for UNICEF and alternative delivery options (ICAI, 2016). In the subsequent parliamentary review session, DFID reported that it is planning to adopt a sustainability check similar to the Dutch development agency and USAID (United Kingdom House of Commons, 2016).

System function

Demand has increased to evaluate UNICEF's system function as an 'organisation of change'. UNICEF was very important as global player for the WASH sector. It is the secretariat of Sanitation and Water for All (SWA), a global partnership of over 100 country governments, external support agencies, civil society organizations and other development partners, a position financed by the Netherlands. UNICEF has a large convening power, bringing finance ministers and other financiers together for agreements on financing the realisation of the 6th Social Development Goal (SDG6).

UNICEF put several global challenges and reforms related to its children's mandate on the WASH development agenda. SDG6 now includes hygiene and the behavioural aspects of sanitation (see also CATS below). Moreover the WASH goal was extended to schools and health centres, so that children and mothers will be more comprehensively protected against infections related to WASH and protect future generations. UNICEF also protected girls by making separate latrines for girls mandatory in all its school programmes and promoting provisions for menstrual hygiene, and stimulates governments to incorporate these aspects into national policies and programmes[16]. Together with WHO UNICEF formulated global WASH standards for schools[17]. With IRC UNICEF piloted integral WASH in schools programmes in six countries globally[18].

UNICEF also raised awareness on the impacts of climate change on children[19]. Finding ways to meet climate challenges began in the early 1960s when UNICEF cooperated with the Indian government to respond to drought and water shortage, an experience since expanded widely through UNICEF's deep well drilling and hand pump programmes and more recently expanded with solar-powered water distribution. UNICEF's Global Innovation Centre (GIC), which has Philips as one of its funding members identifies proven solutions with the potential to be implemented at national scale in multiple countries.

Community approaches to sanitation

One subject area in which UNICEF developed a new global strategy and widely influenced national policies and programmes was sanitation. For many years UNICEF's focus had been on low cost water supply, originating from its large scale drilling and hand pump programme in drought-stricken India since 1967. Based on the success of Community Led Total Sanitation (CLTS), UNICEF adopted a very large scale community approach to sanitation named CATS (Community Approaches to Total Sanitation) in 2008. By 2015 11.8 million people lived in 23,316 villages with ODF certification in 71 countries (UNICEF, 2015b).

An independent evaluation in five selected countries (India, Mauretania, Mozambique, Nepal and Sierra Leone) found that in the short run the approach had been effective and cost efficient. It has realised an end to open defecation and promotes self-made toilets, mostly basic models with a slab, lid and roof to protect the slab and walls for privacy, and handwashing facilities nearby with water, soap/ash and evidence of regular use. Costs to donors and governments were consistently lower than that of other approaches, because households make the toilet investments. In WCARO the promotion ('triggering') costs were USD 8-14 per capita. CATS targets the more remote and socio-economically disadvantaged districts. Quality and integration of monitoring up to OD certification were reported as strong. Although no hard data was collected, local interviews consistently report substantial benefits for women and girls, because the

[16] http://www.sanitationmonitoringtoolkit.com/sanitation-monitoring-toolkit/monitoring-wash-in-schools
[17] http://www.who.int/water_sanitation_health/publications/wash_standards_school.pdf
[18] http://www.unicef.org/wash/files/TP_48_WASH_Schools_07.pdf
[19] http://www.unicef.org/publications/files/Unless_we_act_now_The_impact_of_climate_change_on_children.pdf

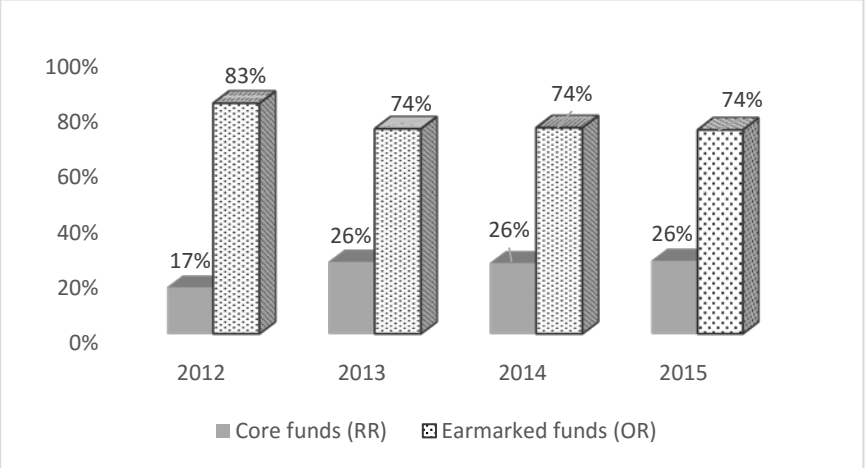
participatory movement increased their participation in decision-making and the end of OD increased their privacy, safety and comfort.

The massive results have made that in virtually all countries governments have changed national policies, strategies and programmes in favour of CATS. UNICEF also helped align other development partners to CATS. The researchers were confident that without UNICEF-CATS changes would not have happened to the extent they have. Reinforcement is now needed to sustain the initial good results. This will raise costs and requires more attention to local capacities and resources than given so far, as does post-certification monitoring in the national systems (UNICEF, 2014a).

Organisational efficiency

In the period under study the UNICEF resources in core funds, US$ 4.580m was 24% of the total resources of that period (US$ 18.977m). Figure 8 shows that this discrepancy was consistent in all four years.

Figure 4 UNICEF's regular resources (core funds) and other, earmarked funds in 2012-2015

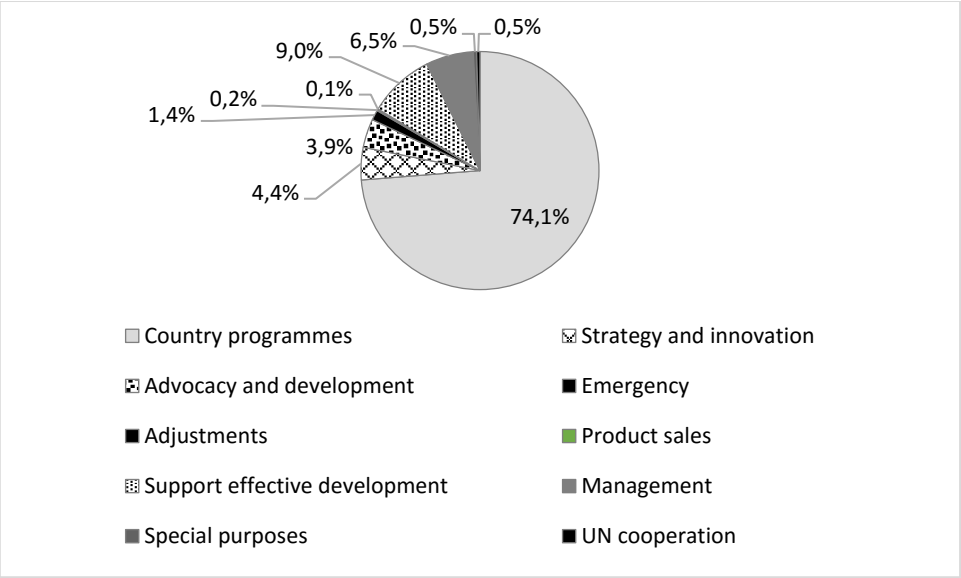


Core funds not only served to finance UNICEF's system functions and institutional costs; in fact the major part went to bridge gaps between earmarked funds in country programmes, e.g. in 2015 (Figure 9). In 2015, for example, UNICEF spent US$ 1.114m or 95% of its regular resources (RR). Of this amount 74% was used for the country programmes, e.g. to fill the gaps between earmarked funds and country programme requirements. Some 10% went strategy development, innovations, advocacy and programme development functions, incl. emergency, and 6.5% to management, while UN cooperation got 0.5%.

The low voluntary contributions of national governments including the Netherlands to the UNICF core funds made it increasingly difficult for UNICEF to meet its standard of allocating US$ 850,000/country, with at least 60% of the core funds for the least developed countries and 50% for country programmes in Sub-Saharan Africa (UNICEF, 2015b). This consistently low share of unearmarked funds is a concern because they give much needed flexibility to implement the UNICEF strategic plan at country level and align designs with national policies, plans and programmes.

The data further showed that a relatively modest share of core funds went to management costs. Less transparent was that under the current system there was no accounting for the share of all resources combined that went to management costs at all levels (head office, regional offices and country offices). No comparison was made with UNICEF's own performance indicators on organisational efficiency and effectiveness because of the large number (64) of very diverse indicators (United Nations, 2013: Annex 1).

Figure 5 UNICEF expenditure of core funds (regular resources) in 2015



Source: UNICEF ARR 2015

Evaluation and quality assurance

To account for its resource use, demonstrate results and show added value to the UN and its members, UNICEF has a separate evaluation office. Since 2000 UNICEF's evaluation office has published all evaluations in a public database (http://www.unicef.org/evaldatabase). Between 2012 and 2015 394 evaluations were carried out, of which 37 (9%) on WASH. Three percent (10 reports) were on programmes in countries with Netherlands' assistance to UNICEF and were included in this desk review. At least 12 other evaluations, not classified under water and sanitation, related to WASH in schools or to school programmes that included WASH aspects. These brought WASH-related evaluations to at least 12% of all evaluations commissioned and quality-checked by the evaluation office. One evaluation was the 2015 sustainability check in Mali. It is not clear why out of all SCs done this particular study was included in the global database. An independent external organisation checks the evaluation studies of the country- and regional offices. The results of this Global Evaluation Oversight System (GEROS) are published annually and included in UNICEF's annual reports.

In 2016 the evaluation office analysed 112 independent WASH evaluations implemented between January 2007 and July 2015 on equity, scalability and sustainability. A total of 64 evaluations and 10 sustainability check reports were chosen on quality and type of programme (no emergencies). Material came from all regions, but mainly ESARO (50%) and WCARO (27%) and addressed all three WASH domains: water (65%), sanitation and hygiene (85%) and WASH in schools/clinics (54%). The meta-study found that in spite of individual good practices a systematic and standard approach to equity, scaling up and sustainability was still lacking (UNICEF, 2016c).

Good consistency was found between the findings of the meta-evaluation and this study. On geographic equity, the meta-study noted the absence of clear targets, while this study had mostly implicit evidence, e.g. the choice for remote border districts. However, in neither case were situations at start reported against. Gender equity usually referred to women only. In both studies this was limited to self-reported benefits, women on committees and separate toilet blocks for schoolgirls. Equity aspects of other deprived, vulnerable and marginal groups were equally rare and a clear and comprehensive equity strategy was not found.

In the meta-study scaling up was either addressed in terms of likelihood (2/3rd of cases) or as an actual development (1/3rd of cases). Here the issue was that going to scale was not addressed systematically and with clear conceptual models. The unsuitability of the 'old models', which the meta-study referred to, included the reliance on partnerships with direct cash transfers, which was also found in this study with regard to reliance on short-time contracts for NGOs to promote sanitation and hygiene.

The meta-evaluation found the most robust evidence on sustainability. There is agreement with the findings of this study – be it without statistics and systematic indicators - that effective financing, service management and governance and regulations were major problems influencing long-term functionality of water services and in sanitation a model or models that enable households to replace temporary toilets by durable ones.

For handwashing findings were also consistent: this was found to be primarily a matter of achieving a critical mass. In this respect the results in this study were better than those of the meta-evaluation (5%-25% observed handwashing provisions) Depending on the definition of what is a proper handwashing provision this study found somewhat better results in ESARO, especially in Rwanda (Table 21) and much better (but short-term) results in WCARO with observed presences of around 80%, except in Ghana (31%) (Table 45).

In its management response of 28 July 2016 UNICEF agreed to strengthen its evidence base in the three fields. It will continue to strengthen the enabling environment that underlies more equal access to facilities, processes and benefits, better sustained services, institutions and behaviours. Documentation of who will and is involved and why will be improved and aspects of scalability and sustainability will get more attention in programme design and implementation. In a reaction IGG supported these outcomes and challenged UNICEF to make WASH a headline in its next strategic plan and become a sustainability 'game changer'. The latter could involve adopting a 15-year functionality standard for water supply services, making an annual functionality report for the Board and making the independent external functionality check itself sustainable and no longer dependent on external support and encouragement (emails to PV, 12 September 2016).

How good UNICEF's evaluation function is in comparison with other UN organisations and programmes emerged from a study of 28 UN organisations. It was done by the independent Joint Inspection Unit (JIU) (Prom-Jackson & Bartsiotas, 2014). The evaluators found that with regard to the development of their evaluation function, UNICEF and seven other UN organisations, or 29%, scored between 3 and 4 on a ranking going from 1 (lowest) to 5 (highest). Only one organisation (UNDP) scored higher (4); none scored 5. The satisfactory score for UNICEF reflected the existence of an institutional framework for evaluation, the relevance of the evaluations done and the independency, quality and utility of the evaluations. On the down side the study noted that UNICEF did not yet have a strategy for evaluations. Emphasis was on accountability; a learning organisation and an evaluation culture were still underdeveloped.

The nine best performers were all large UN organisations with a stand-alone evaluation function not combined with other functions such as general management. UNICEF's evaluation office is within the office of the executive head, but it is administratively independent, including on financial and human resources management and recruitment of staff and consultants. In total, UNICEF met half of the criteria of an independent evaluation function. It had a protected evaluation budget and a standard was set to reserve 1% of programme funds for evaluation, but without disclosing the underlying logic. However, at the time of the study the office had no independence in reporting to member countries and the director of UNICEF decides on who will be the head of the evaluation office and whether he/she will get a second term (the maximum).

In terms of staff competence, UNICEF was one of 13 UN organisations out of 28, or 46%, that had an external assessment of its evaluation work done, and one of seven that "have reached a high level of quality of evaluation reports meeting professional standards" (Prom-Jackson & Bartsiotas, 2014: 39). Internal quality control measures are applied, but the office has no independent reviews of evaluations and no peer review of the evaluation function, e.g. by the OECD-DAC.

Weakest were all UN agencies on the use and impact of evaluation findings. The emphasis has been on data collection and reporting more than on use of findings as a learning tool and for mid-term correction. UNICEF scored level 3, while 7 was the highest possible. Only two agencies scored level 4.

At regional and country levels, UNICEF was one of ten UN organisations with a clear framework and rules for planning, implementation and reporting of field evaluations. And one of three where the central evaluation unit has a mandate to support the development of national evaluation capacity. The organisation increased its number of evaluation staff in regional and country offices. However, the number was still insufficient and they sometimes spent up to 70% of time for evaluation otherwise. The professional quality of the field evaluation reports was found to be at or above average (Prom-Jackson & Bartsiotas, 2014).

WASH POLICY OF THE NETHERLANDS: CONCLUSIONS

Choice of financing channels

Table 56 contains a comparison of the comparative advantages of the UN channel as expressed in the Dutch policy documents summarised in the first chapter and the findings in this study. The table shows that of the expected advantages four were met (although not all sufficiently), five were not met and one was missing (environment).

Noticeable was especially the large scale and effective outcomes in terms of new people getting access to water services and being reached by sanitation and hygiene. With one year left in Rwanda and Zambia and halfway the WCARO programme, the total targets of the two regional programmes together have already been largely met: 4.5 million people or 104% of the intended new water users, 4.4 million people for sanitation or 71% of the sanitation promotion target and 4.1 million people or 66% of those meant to be reached by hygiene promotion.[20]. In addition 77% of all targeted schools (almost 1600) and 1.1 million or 90% of the targeted pupils have already got WASH facilities, with girls and boys getting separate toilet blocks in almost every school. WASH in local health centres was with 43% the least effective overall output.

Effective management of the local water services and full-cycle sanitation, and adoption of the three key behaviours at scale (including testing various models) were still under development. They were unlikely to be achieved in the remaining programme period and with the current resources from districts, NGOs and the private sector.

Table 54 Degree to which expected comparative advantages from cooperation with UNICEF WASH have been realised

Expected	Found
Create platforms for international agreements, norms and standards	Yes. UNICEF influenced especially sanitation policy and programmes and hygiene focus on 3 key behaviours: universal toilet use without fecal transmission risks, handwashing with soap at all critical times and drinking water safety in homes. More reliable and valid measurement at scale as part of national programmes is yet to be established.
Synergy with Dutch development policy	Yes. The programmes are decentralized and community based and involve local and international NGOs and the local private sector in implementation on their specific expertise: participation and training, drilling, consultancy
	Not yet: Building long-term capacity with NGOs and private sector for community water management and full chain sanitation (sanitation marketing, safe sludge management)

[20] More innovative targets were added under the WCARO programme: certified ODF villages, handwashing facilities near toilets with water and soap/ash and facilities for water safety in homes. At 55% of programme time passed, results were 55% of villages ODF, 50% of households with minimally basic sanitation, 15% of households with home water treatment, 11% with water safety 32% of targeted schools, 19% of students and 39% of health centres with WASH facilities, although their continued presence still needs to be integrated into national censuses or representative programme surveys.

Roles of Dutch expertise, NGOS and businesses, strategic secondments	Yes for NGOs. Five NGOs involved, for capacity development (AKVO, Practica, and SNV), school WASH (Cordaid) and SC quality assurance and learning (IRC). No secondments to UNICEF WASH.
Worldwide presence and strong operation capacity in WASH	Yes. Cooperation programme cover 18 countries of which 11 out of 15 Dutch focus countries.
Lasting country commitments	Yes. Regional programmes continue, with 10 donors joining to give support in specific countries, mostly to sanitation, but no new donors supports region-wide.
Large and effectiveness of programme	Yes for outputs and outcomes. 4.2 million new water users, 4.4 million reached by sanitation promotion, over 1 million children in 1600 schools and 277 health centres with WASH facilities when six countries still have 1-2 years. Not yet for sustainability: effective local management of water services, sustained ODF, climbing sanitation ladder, post-implementation monitoring and support to the communities.
Professional capacity	WASH professionals are from technical and social sciences. Their numbers grew from 480 in 2012 to 680 in 2015. No data could be obtained on the mix of expertise and developments therein.
Stimulation of new developments	Started. Mostly technical (spread of hand drilling, piloting solar supply, home water treatment methods) and monitoring (real-live monitoring with smartphones and internet, quality control sustainability research). No cooperation on institutional models of sustainable water, sanitation service delivery.
Mainstreaming social and gender equity	Yes for poor: countries all under-performed on WASH MDGs. All but 3 in Africa, the poorest continent. Not yet for poverty profiles of the districts and guidance for pro-poor service management, and insufficient for gender equity strategies and monitoring and reporting of results.
Ecological sustainability	Not supported by programme findings
Linkage with other UN agencies	Little support by programme findings. Within UN only reported for WHO (close cooperation) and One UN. One case of cooperation in UNICEF (WASH and Child Protection in Malawi).

The programme holder for the regional programmes (IGG) had a positive and constructive cooperation with UNICEF WASH. Staff were open to suggestions and responses were mostly positive. Some required better understanding of each other's reasons and regulations. A budget line of 10%-15% of WCARO funds for Dutch NGOs for instance was not compatible with UNICEF's procurement rules until it became clear that this was not for 'tied aid', but to ensure that relevant Dutch knowledge was not lost to the sector, which was an important comparative advantage to Dutch parliament. The idea of formal commitments to and checks of actual sustainability was also new for UNICEF, but since then other donors began to recommend or include them (DFID and JICA respectively).

Comparison of different financing channels

Comparison with the independent financing channel evaluation of Rijsdijk and van Apeldoorn (2016) has taught that the cases of bilateral (2), NGO (5), multi-lateral (5) and private sector financing (2) all scored the same on the DAC indicators of relevance, effectiveness, efficiency (in terms of results within time) and sustainability. The only difference seemed to be that NGOS did better on the innovate multiple uses of drinking water (consumption *and* production), gender (in terms of sex-specific data, but not on how equitably users with different power and interests take part and benefit) and environment.

Dutch policy gives programme scale (in terms of numbers of benefitting people) as an important comparative advantage of UNICEF WASH over NGOs. However, the evaluation could not demonstrate this, because the

UNICEF sub-sample was very small compared to that of the NGOs and the study did not cover the total numbers of new users achieved in an agreed period under allocations though the respective channels.

Regarding costs, user contributions were made under all three financing mechanisms, but without percentage data. However, the evaluation did not evaluate the share of national/local governments in bilateral, NGO, multilateral and PPP-financed programmes. In ESARO and WCARO programmes partner governments contributed 14% and 18% respectively. It was also not possible to compare unit costs, one reason being that no standard calculation method has been agreed on.

The 2016 evaluation reported overhead costs of 10% for UNICEF WASH, 10%-15% for NGOs and 5% and 8% for programmes with the private sector. They were all within the internationally agreed standard of 20%.[21]. Public media allegations against high overhead costs of multilaterals and NGOs (also known as "strijkstok" and "apparaatskostenvergoedingen"or AKV) were thus based on incidents, rather than structural evidence.

At the same time, the confidence and comparability of this data could not be assured, because there was no agreed and clear (or even, if possible, standard) definition of which costs constitute overhead, and what the role was of locally specific factors, such as isolated areas with low population density or social and political instability. Dutch NGOs were reported to be strong in innovation and learning for innovative engagement of the private sector, market creation and generating demand in sanitation and hygiene behaviour. On the Fonds Duurzaam Water (Fund for Sustainable Water) with a strong PPP focus, the evaluation memorandum commented that it was overambitious and that its logic on results was unclear (MinBuZa, 2012b).

Effectiveness and efficiency

The annual reports of the Ministry of Foreign Trade and Development Cooperation report each year if the expenditures on water, including on WASH, were conform the amounts budgeted. One problem found here was that not all reports were consistent in giving also the sub-division of expenditure for water resources management and drinking water supply and sanitation. Under WASH there was also no sub-division by channel and no linkage with per channel an overview, or at least an accumulative table of the total numbers of new people served by new construction and by repaired/rehabilitated facilities, each with their aggregated expenditure. The latter would be relevant as this second group of users was served in the past and the proportion is in a way another indicator for lack of sustainability.

Monitoring

With regard to monitoring it was found that for the programmes reviewed (ESARO and WCARO) no rolling monitoring system existed with overviews of the status of reporting and the content results, e.g. for the DAC-defined categories.

6. CONCLUSIONS

Financing channel

The choice for financing UNICEF made sense, seen the size and effectiveness of the evaluated regional programmes and the contribution of UNICEF to international agreements, norms and standards on WASH, especially on domestic sanitation and hygiene and on WASH in schools and health centres. The advantages came especially from UNICEF's international functions in WASH: advice on SDG 6, standard setting for and monitoring of world-wide progress on WASH in the annual Joint Monitoring Reports together with the WHO, convening power for high level meetings to finance MDG7 and SDG6.

[21] SNV 20% budgeted, 15% actual, Aqua for All 10% budgeted, 13% actual, WASH Alliance with Simavi, AMREF, ICCO, WASTE, AKVO, RAIN, IRC, Both ENDS, Wetlands, RUAF, Practica Foundation and Wateraid 14%; PPPs Vitens-Evidens 5% and FUSP 5%. Comparatively the World Bank has a standard charge of 17%, WHO 14% and NOVEB 7,5%.

At programme level the advantage was especially the long-term cooperation with national governments on WASH, with UNICEF using its core (non-earmarked) income to bridge any gaps in programme funding. This, and its UN mandate for all child-related development, in which WASH is a key sector, made that the national governments trusted UNICEF and adjusted their policies and programmes when good effectiveness and efficiency were demonstrated. For the Netherlands the high effectiveness and good output efficiency made UNICEF an excellent partner, with whom much work could be done, given the minor human resources available (2 FTE in IGG for a EUR 90m programme) and with whom very quick action was possible (funds for the Ebola crisis in two days' time). The negative side was that the programme got little support as other, more problematic programmes took all available capacity, as evidenced by weaknesses in sustainability and documentation.

Effective and efficient programmes

The evaluation of the two UNICEF regional programmes that had the largest share of multilateral support on WASH showed that they were effective and efficient. With one to two more years to go in nine of the 11 countries, outputs for improved water supply and promotion of sanitation and hygiene were already achieved and are likely to be surpassed. In total 4.5 million new water users were reached at the end of this study, 104% of the combined regional targets (with WCARO half-way). For sanitation almost 4.4 million people (71% of the target) had been reached by freedom from open defecation programmes and for hygiene almost 4.1 million people (66%)[22]. In school sanitation almost 1,600 schools (72%) had WASH facilities installed for almost 1,1 students (90%). Only the 61% output for WASH facilities in rural health centres was not satisfactory according to OECD-DAC's Operational Guidelines for Classifying Evaluation Findings. This was due to the low output (46%) in ESARO. In WCARO output was on track with 65% achieved half-way.

Independent studies confirmed that all sampled provisions were present in the field. Water and sanitation outcomes (numbers of new people served) were well on track and likely to be reached or surpassed (for sanitation in terms of freedom from open defecation). For WASH in institutions the target of new students with access to WASH – with separate blocks for girls and boys – was also likely to be surpassed. Only the targets for rural health centres were unlikely to be met. Hard data on numbers of new people with access to adequate sanitation could not be traced, however, due to the lack of baseline data in the programme villages. Also the use of standard numbers of persons or students served per facility may mean that actual outcomes may be higher (and conversely in some cases lower) than reported.

Several points from the earlier sector policy evaluation (Ministerie van Buitenlandse Zaken, 2012) were taken up in the UNICEF programmes. The innovative addition of mini-networks to hand pumps in Mozambique and Mauretania (including tests with solar power) helped to improve service delivery and may have reduced collection time and contamination risks, although so far no impact study has been done. Adding water safety programmes to ensure really safe drinking water at point of use and sustaining and monitoring functionality through new media (cell phone reports by local users, internet monitoring of functionality) were promising, but still require more time, effort and documented evidence.

Efficiency in ESARO was good, with results achieved within the given time and budget. Halfway through the programme, WCARO was on track for the water supply targets. Sanitation, hygiene and WASH in schools and health centres lagged behind, the last one too much for realisation at the end of the programme. Reasons for delays were generally understandable: teething problems with a new drilling method, raised costs of materials necessitating new designs and civic unrest in CAR and Mali. As the financial targets showed signs of cost overruns, increase of UNICEF and national funds and downsizing of the water targets made sense, but

[22] More innovative targets were added under the WCARO programme: certified ODF villages, handwashing facilities near toilets with water and soap/ash and facilities for water safety in homes. At 55% of programme time passed, results were 55% of villages ODF, 50% of households with minimally basic sanitation, 15% of households with home water treatment, 11% with water safety 32% of targeted schools, 19% of students and 39% of health centres with WASH facilities, although their continued presence still needs to be integrated into national censuses or representative programme surveys.

not the reduction of national contributions and the shifting of the grown financial burden to local governments and communities. In both regions the unit costs for water and sanitation were below the norms of the Netherlands (US$ 25 for water and US$ 20 for sanitation), but for sanitation they related to initial ODF status. Not included were costs of sustaining this status and social marketing of affordable durable toilets.

Rijsdijk's and van Apeldoorn's comparison of the four main financing channels for WASH – multilateral, bilateral, NGO and private sector did not bring out differences in effectiveness, efficiency and sustainability results. The reported costs of overheads and organisation (in Dutch also known as AKVs) were quite acceptable, as they remained well below accepted international standard of 20% in the two case studies and the comparative channel evaluation. However, the sources of the comparative study (one evaluation covering two bilateral programmes, five multilateral programmes (3 UNICEF country, 1 UNICEF regional – WCARO), 1 other multilateral programme (WSSCC), 5 NGO programmes and 2 private sector programmes) without clearly defined selection criteria was too limited and unrepresentative to draw reliable conclusions on these aspects.

In UNICEF, the regional offices ESARO and WCARO lacked cost breakdowns including what the contracted NGOs could charge for management and overhead costs. DGIS did not have clear agreements on these costs including which costs could be booked as AKV or overhead. The only aspects where NGOs did better (but with the above mentioned limitation of rigor) was innovation on especially social and market aspects This was especially in sanitation and hygiene, e.g. with regard to lifecycle approach to sanitation, market approach to durable yet affordable latrines and hygiene equipment and programme-wide gender equality. New donors came in, but only to support a single component (sanitation) in individual country programmes, and not, as the Netherlands, support a comprehensive WASH programme at region level.

WASH sector targets: access and sustainability

With one to two more years still to go in nine countries, the evaluated largest programme contributions resulted in a total of 4.5 million new water users, 4.4 million people in programmes for sanitation, 4.1 million people reached by hygiene promotion and 1.1 million primary school students who got WASH facilities. This means that with regard to the Dutch water target of 2018 the two regional programmes already contributed 17% in 2015; with regard to the Dutch sanitation target of 2015 this was 18%.

Sustainability goals were not yet met, the least so for the social, financial and organisational aspects. In up to four years it was not possible to combine large-scale outputs and outcomes with building the capacities of local management organisations and the local private sector. These goals are complex and need a stronger and more balanced focus, including for the decentralised support services and support from UNICEF for adopting standards for decentralised management. The earlier IOB sector evaluation already pointed at the importance of a sufficiently large support budget for local governments to monitor and support community or enterprise managed services. UNICEF now relies on local NGOs for community support, but this is not sustainable over time. Not enough data, including on accountability and social inclusion was provided on the effectiveness and efficiency of the pilots on private sector service delivery. The proposed innovation of post delivery service by the international private sector is another potential model for testing, including its contribution to local private sector development, social inclusion for the poor and for women entrepreneurs, and its accountability for paid service delivery and the roles of the local user organisations in this.

Sustainability checks were a very valuable innovation, but their current complexity and cost made them unsuitable to be integrated in national systems. The research quality had quite some flaws in individual cases While sufficient country-specificness is important, countries can benefit from a core set of well-defined programme indicators, norms and standards, that is applicable for common elements, such as hand pump services, CATS and WASH facilities in schools and health centres, including the quality of O&M financing and accounting to users on what their payments were used for. It is positive that the data themselves are slowly

becoming part of national data bases and are not used to create a regional monitoring layer. The SC ToR, budget and organisation are however not yet supporting this development other than sharing outcomes with district staff and planning corrective actions.

Accountability and follow-up

The annual use of UNICEF's core funds reflected a clear commitment to WASH, as the annual amounts allocated in 2013, 2014 and 2015 (around US$1.2m) were double the amount in 2012 (US$ 663m). Human resources on WASH also increased, but information on development of balance in UNICEF's human capacity – social and organisational next to technical – was missing. With regard to the earmarked funding DGIS had clear agreements on monitoring and reporting with UNICEF ESARO and WCARO. However, within DGIS the system of monitoring reports and follow-up was not complete and up to date. Systematic and rolling overviews per country and region of all reports due and received were lacking. There was also no rolling overview on physical and financial progress and content performance, including cross-cutting aspects. In consequence management responses from the field and the ministry often had an individual rather than a structural character[23].

7. RECOMMENDATIONS

Financing channel

Given the good immediate results of the two evaluated regional programmes and the complementary capabilities of Dutch NGOs demanded by the regional offices it is recommended to continue multilateral support to UNICEF's large-scale and preferably multi-country regional WASH programmes, but agree already during the formulation phase which NGOs are needed for supplementary expertise. Examples could be capacity building for demand-based behaviour change (implementation and monitoring), life cycle programming, market approaches to low-cost durable sanitation, gender equity and real time monitoring. This expertise would ideally already be used in programme formulation. Also a better balance between core funding for system functions and flexibility and programme funding for earmarked sectors and locations should be strived for.

Effective and efficient programmes

While WASH access and sustainability remain crucial primary goals, the context of poverty reduction and climate change require more strengthening of inter-sectoral linkages, e.g. for productive uses of water, excreta and time gains. In the preceding phase before programme formulation it is advised to discuss with UNICEF where linkages with other sections and programmes of UNICEF, such as education and health can have added value. This also goes for linkages with other relevant UN organisations or programmes, such as the UN Small Enterprise Programme and water and excreta for food security.

Transparency and efficiency would benefit from agreements with UNICEF and Dutch NGOs on which costs can be defined and are acceptable as overhead costs and how they will be reported as part of the UNICEF system. The same goes for an agreement with UNICEF on the more detailed breakdown of expenditures by purpose to increase transparency on divisions between water supply, sanitation, hygiene and WASH in institutions, and between hardware and software. UNICEF WCARO recommended to add a methodology for the calculation of the in-kind contribution of the government and the communities to get a more complete and true picture of cost-sharing.

WASH sector targets

While output and outcome targets were or will mostly or fully be achieved and some even surpassed, sustainability requires a Phase II follow-up programme with special expertise to build the capacities of local

[23]. Within UNICEF, WCARO and SIWI are compiling the management responses to the SCs and the agreed follow-up actions into a single document to look at commonalities in terms of the issues and programmatic responses (Kelly Ann Naylor, pers. com.)

level government services to training and support the communities on all sustainability aspects of WASH services. A second focus area would be finding sustainable financial and institutional solutions for longer-term government support, since in the long run external financing of support by local NGOs is not sustainable.

A first step was made with the allocation of EUR 10m for enhancing sustainability in ESARO after 2015. New partnerships of national and local governments, UNICEF, knowledge NGOs and private sector players such as hand pump companies and sanitation enterprise will be needed. More action research is needed to know where and how community management is most effective and efficient and when and where a private sector service delivery model with social inclusion should be used, to realise 'WASH for all and for ever'.

In two regional workshops with UNICEF, the national monitoring institutions and external monitoring specialists on sustainability aspects of WASH the present monitoring instrument should be simplified, its reliability strengthened and a common core of indicators agreed on for comparability at programme level. National monitoring capacity should be developed at both decentralised level (data collection and analysis) and national level (integration into WASH data base) with external quality control to maintain the nationally appreciated independency of the data. It is also advised to include a baseline study for impact measurement in every programme design, with attention to dealing with the problem of influencing external factors. UNICEF should stimulate other donors to join in implementing and supporting sustainability monitoring.

Accountability and follow-up

To improve monitoring and reporting for accountability and follow up and enhance sustainability DGIS should get sufficient capacity to develop and use rolling overviews on implementation, as well as key process quality indicators, such as community participation with equity on gender and for the poor at country and programme level. An agreement with UNICEF on progressive monitoring of not only outputs and outcomes, but also on core Indicators on quality of implementation and on sustainability, and data on the balance of UNICEF's technical, social and organisational capacity will also be important, the more so if/when a multi-donor thematic approach for an integrated and regional WASH programme is agreed on. Finally, it is recommended that UNICEF develops general standards for local service delivery, including sustainable and transparent financing with accountability to those paying for the service and adequate supervision of all forms of decentralised service management.

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