



SHARE Annual Report 2016

Building knowledge. Improving the WASH sector.

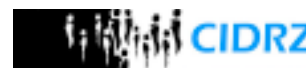
Review Date: July 2016
Programme Value: £15,890,000
Start Date: 20 January 2010
End Date: 31 December 2018



This material has been funded by UK aid from the Department for International Development (DFID). However, the views expressed do not necessarily reflect the Department's official policies.



Contributors



Contents

List of tables and figures	5
Acronyms	6
Executive summary	7
Summary of progress and lessons learnt since last review	7
Summary of recommendations for the next year	9
1 Introduction and context	10
1.1 Programme outline	10
2 Performance and conclusions	13
2.1 Outcome assessment	13
2.2 Output assessment	15
2.3 Key lessons	16
2.4 Key actions	16
2.5 Logframe updates	17
3 Output scoring	18
3.1 Research	18
3.2 Research into Use	23
3.3 Capacity development	32
3.4 Management	35
4 Value for money and financial performance	37
4.1 Key cost drivers	37
4.2 Value for money performance	40
4.3 Value for money assessment	42
4.4 Financial management performance	43
5 Risk	44
5.1 Overview of risk	44
5.2 Outstanding actions	45
6 Commercial considerations	46
6.1 Delivery against timeframe	46
6.2 Partnership performance	46
7 Conditionality	47
8 Monitoring and evaluation	48
8.1 Evidence and evaluation	48
8.2 Monitoring progress	49
8.3 Annual report process	50
8.4 Research outputs in brief	51

Annexes	52
Annex A: Logframe	52
Annex B: Financial documents	61
Annex C: Forward work plan	62
Annex D: Asset register	64
Annex E: List of outputs	65
Annex F: Phase II Impact-level data	68
Annex G: Success stories	70
Annex H: Bibliometrics and publication analysis	81
Annex I: Infographic: Study by MEIRU in Malawi	83



List of tables and figures

- Table 1:** Progress towards outcomes
- Table 2:** Output 1 Progress
- Table 3:** SHARE research projects
- Table 4:** Output 2 progress
- Table 5:** Key SHARE events
- Table 6:** Output 3 progress
- Table 7:** Output 4 progress
- Table 8:** Published research outputs
- Table 9:** Technologies
- Table 10:** Expenditure for reporting period against overall consortium budget
- Table 11:** Asset register
- Table 12:** List of outputs published in the reporting period
- Table 13:** Baseline and targets for Impact Indicator 1
- Table 14:** Baseline and targets for Impact Indicator
- Table 15:** Uptake of Violence, Gender and WASH Toolkit
- Table 16:** Uptake of Menstrual Hygiene Matters Resource
- Table 17:** Journal normalised citation impact for selected SHARE papers
-
- Figure 1:** SHARE's Theory of Change
- Figure 2:** Altmetric page for highest-rated SHARE paper
- Figure 3:** Phase II activity progress
- Figure 4:** Percentage of value of Phase II contracts issued to project countries and other regions
- Figure 5:** Revised matrix to assist coding, mitigation and decision making for projects in Phase II
- Figure 6:** Forward work plan
- Figure 7:** Statistics used in the synthesis report
- Figure 8:** Percentage of SHARE publications by research area
- Figure 9:** SHARE's international collaborations

Acronyms

BMGF	Bill and Melinda Gates Foundation	NGO	Non-governmental organisation
CAG	Consortium Advisory Group	NM-AIST	Nelson Mandela African Institute of Science and Technology
CEO	Chief Executive Officer	NSC	National Sanitation Campaign
CIDRZ	Centre for Infectious Disease Research in Zambia	NTD	Neglected tropical diseases
CLTS	Community-led total sanitation	PLOS	Public Library of Science
COMREC	College of Medicine Research and Ethics Committee (Malawi)	PwC	PricewaterhouseCoopers
DFID	Department for International Development, UK	RCT	Randomised controlled trial
GLUK	Great Lakes University of Kisumu (Kenya)	RIU	Research into Use
HCF	Healthcare facilities	SDG	Sustainable Development Goal
HWWS	Handwashing with soap	SHARE	Sanitation and Hygiene Applied Research for Equity
ICDDR,B	International Centre for Diarrhoeal Disease Research, Bangladesh	SHINE	Sanitation, Hygiene, Infant Nutrition Efficacy Project
IFEH	International Federation of Environmental Health	SPLASH	Schools Promoting Learning Achievement through Sanitation and Hygiene
ICRC	International Committee of the Red Cross	SRPS	Sanitation-related psychosocial stress
JMP	Joint Monitoring Programme	UN	United Nations
LF	Logical framework	UNICEF	United Nations Children's Fund
LMIC	Low and middle income countries	UNHCR	UN High Commissioner for Refugees
LSHTM	London School of Hygiene and Tropical Medicine	USAID	United States Agency for International Development
MDG	Millennium Development Goal	VfM	Value for money
MEIRU	Malawi Epidemiology and Intervention Research Unit	WASH	Water, sanitation and hygiene
M&E	Monitoring and evaluation	WEDC	Water, Engineering and Development Centre
MHM	Menstrual hygiene management	WHO	World Health Organization
MITU	Mwanza Intervention Trials Unit	WSSCC	Water Supply and Sanitation Collaborative Council
MSF	Médecins Sans Frontières	WSUP	Water and Sanitation for the Urban Poor

Executive summary

Summary of progress and lessons learnt since last review

The past year has seen continued progress in developing the quality of SHARE's research across the thematic areas of WASH and undernutrition; WASH and routine immunisation; WASH and pro-poor urban sanitation, and WASH and complementary food hygiene. Five nationally focussed research projects were contracted and co-funding is being sought for a sixth. All projects are collaborative from across and outside of SHARE, and the first stakeholder consultations have taken place.

The gender work started in Phase I continued with further additional funding from WSSCC for the research into psychosocial stress among women and girls in India. In addition SHARE continued to raise the profile of female authors by increasing its percentage for SHARE work to 43%, a rise of 13% on the previous year.

The second half of the year was overshadowed by the sad death of Jeroen Ensink. As our Capacity Director and a member of the Management Group, he supported the partners in developing their research protocols, and by participating in projects. As a result of experiencing the impact of such a loss, SHARE reviewed its risk assessment to include all management staff. The last few months of the year saw the finalisation of the partners' capacity development plans that Jeroen had discussed with each of them in 2015, and they are a legacy to his commitment to institutional and sectoral sustainability. The programmes cover personal career development, institutional departmental growth and research management activities.

In March 2016 SHARE recruited a full-time Monitoring and Evaluation (M&E) Officer in response to the 2015 external review. Even in such a short space of time the improvement in systems has been substantial and noticeable. The use of bibliometrics in assessing the influence of SHARE's published research outputs showed that while a popular paper such as 'Water, sanitation and hygiene for the prevention of diarrhoea' achieved an above average journal normalised citation impact of 4.06 (norm =1), a paper on a much more specialised and apparently recondite topic 'A retrospective analysis of burden of disease data in the sector from 145 countries' received a score of 11.98. This illustrates both the impact of SHARE's role as a disseminator of research findings and the complexity of the process.

Further progress in monitoring revealed two erroneous figures reported in the previous year. The £4.1 million given as the amount of funds invested by other donors in SHARE research was below the true value of £6.4 million. Similarly, our report that £79 million was invested in sanitation and hygiene projects influenced by SHARE was found to underestimate the true value of investment by £1.8 million. Results such as these showed the importance of appropriate, useable monitoring tools and strategies.

13%

increase in female authors of journal papers over the year





Effective communications and dissemination activities continued throughout the year. RIU panel presentations, conference side events and national symposia have maintained the success of SHARE's research uptake, and attracted top speakers such as Sanjay Wijesekera, Chief of Water Sanitation and Hygiene at UNICEF. Maternal and child health continued to be a focus with policy briefs on the impact of poor sanitation on nutrition, and **undernutrition and WASH**; the latter policy brief has been included as one of the Sustainable Sanitation Alliance's WASH and Nutrition Forum's top five reads for entrants to the sector.

SHARE produced its first synthesis report in 2016 with the aim of showing SHARE's diverse and complex programme in an appealing and easily accessible format. The 'Success Stories' have proved popular and an excellent vehicle through which to show the influence of our research, they will continue through Phase II and used to good effect in the retrospective assessment of SHARE's impact. SHARE continued to maintain its partnerships with UNICEF, DFID and other policy stakeholders and has learnt the importance of maintaining and growing these relationships to build effective conduits to achieve maximum reach and impact. Through these partnerships SHARE engages with policymakers and practitioners, and reaches across the space between.

Summary of recommendations for the next year

Recommendations

- 1 Legacy strategy:** Legacy strategy to be reviewed at the Consortium Advisory Group in July and developed to formalise SHARE's impact activities post December 2018.
- 2 Website:** Building on the benefits gained from SHARE's redesigned website, carry out an annual review of its features and applicability to keep the site fresh and effective.
- 3 Staff succession planning:** SHARE will develop emergency procedures for the Management Group and share these with the Executive and advisory groups.
- 4 Barriers to communication:** The drop in Executive Group attendance from 89% to 81% was mainly due to technical difficulties with telephone and Skype connections. SHARE will investigate more reliable methods for partners to be able to engage in meetings.
- 5 Reporting tools:** SHARE will continue to develop systems and tools to improve future reporting.
- 6 Engagement between research partners:** SHARE core team to provide more support for strategic engagement between research partners, especially those undertaking formative research, to share methods, data collection tools and findings.
- 7 Gender monitoring:** SHARE will develop better gender monitoring tools and systems.
- 8 Technical assistance versus support:** Prepare better criteria for assessing 'technical assistance' and 'support', to provide clarity for data collection and accurate reporting.
- 9 M&E:** Continue to improve SHARE's data collection, and develop more qualitative methodologies to show where technical assistance and research collaboration have made a tangible impression on the sector.

1 Introduction and context

1.1 Programme outline

The SHARE programme is designed to generate, synthesise, and translate applied research related to sanitation and hygiene in low-income settings. Its purpose is to contribute to achieving universal access to effective, sustainable and equitable sanitation and hygiene through the use of better data and evidence-based approaches in order to improve sanitation and hygiene services and behaviour in poor households.

In 2009, DFID commissioned two scoping studies to assess the knowledge gaps and the demand for long-term research on sanitation, and also on water and sanitation research into use. The key findings were that:

- Inadequate and unsafe sanitation remains a major constraint on health and livelihoods, particularly of poor households where women and disadvantaged groups often suffer disproportionately, and is a major constraint on meeting several Millennium Development Goal (MDG) targets.
- There are significant, but manageable, knowledge gaps in the sanitation sector, particularly on how to improve sanitation and hygiene for poor people.
- By prioritising sanitation research and supporting research into use (RIU), DFID would raise awareness of and action on key issues for this very important sector.

Through a competitive process, DFID awarded combined programme funding to SHARE, costing £10 million over five years with its focus on research to improve sanitation and hygiene and related water aspects. This phase ran from 2010 to 2015.

In late 2014, SHARE was granted a three-year cost extension of £6 million, running to January 2018, which was further extended to December 2018 with a view to maximising the value for money and legacy of Phase I and with a particular focus on four thematic research areas.

Outputs since SHARE's inception have included, as planned:

- A body of validated high quality policy, technical and institutional knowledge that makes a significant contribution to the understanding of sanitation and hygiene issues in the target regions.
- The development of the four global themes as the research focus during Phase II: water, sanitation and hygiene (WASH) and undernutrition; WASH and routine immunisation; WASH and pro-poor urban sanitation; and WASH and complementary food hygiene research.

- Effective communications and dissemination activities that address a range of priority target audiences and that use innovative and appropriate channels including the media, web-based resources, workshops and meetings to complement written material.
- Monitored evidence of uptake of knowledge by developing country policymakers, international organisations and other research institutions.
- Strategic strengthening of primary stakeholders' capacity to undertake research on sanitation and hygiene and of capacity in developing countries to engage with the research process at key levels.
- Documentation of sanitation and hygiene research findings together with other lessons learned, such as on capacity development.
- Laying down the groundwork for sustained impact beyond the lifespan of SHARE.

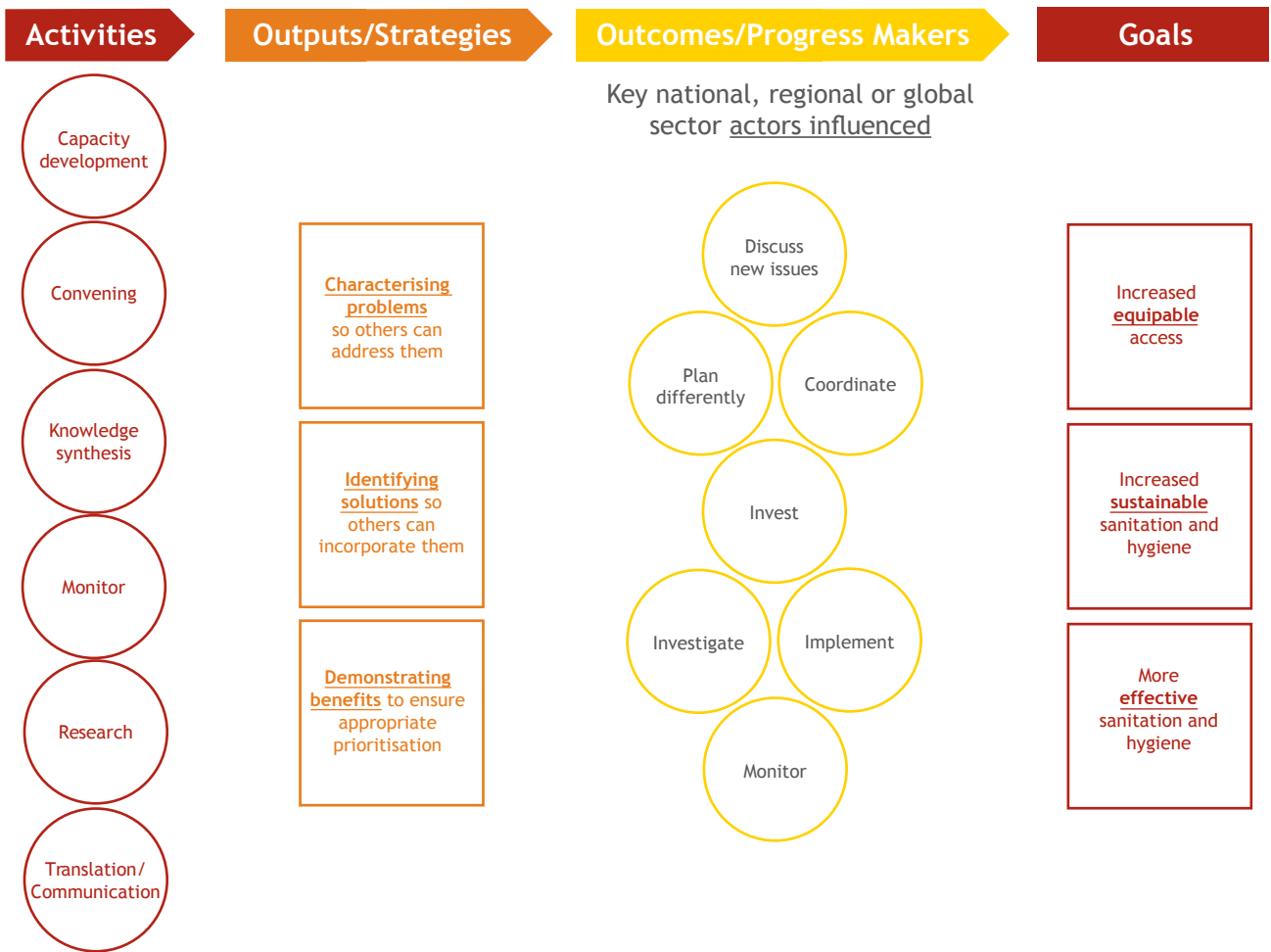
Phase I of SHARE had five partners: the London School of Hygiene & Tropical Medicine (LSHTM), the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), the International Institute for Environment and Development, Shack / Slum Dwellers International, and WaterAid. Such a combination provided a unique opportunity to access a wide range of expertise from international scientific researchers, policy researchers, national water programmes, worldwide sanitation and hygiene programmes, and civil societies.

SHARE focused its activities in four countries - India, Bangladesh, Malawi and Tanzania; working closely with national sector partners to define research priorities, generate rigorous and relevant applied research, and enhance the uptake of new and existing research. SHARE also supported specific research projects in over a dozen other countries including Uganda, Zambia, Zimbabwe, Kenya, Nepal and Ghana.

Phase II focuses on sub-Saharan Africa, building on the foundations laid during Phase I in Tanzania and Malawi, and drawing on new strategic partnerships in Kenya and Zambia. To maximise country ownership of SHARE work and the sustainability of SHARE investments, Phase II has brought on board four partners - one from each African country where it works: the Centre for Infectious Disease Research in Zambia; Great Lakes University of Kisumu, Kenya; Mwanza Intervention Trials Unit, National Institute for Medical Research, Tanzania; and the College of Medicine and the Polytechnic, University of Malawi. This increased diversity provides a broader range of approaches to developing knowledge, and opportunities to use that knowledge to create sustainable change.

The shift to a solely Africa-based programme was the result of consultation with DFID, and has provided SHARE with the opportunity to focus on developing WASH research in Malawi and Tanzania. SHARE continues to integrate its capacity development, RIU and monitoring within the research projects, as well as providing a programme of activities.

Figure 1: SHARE’s Theory of Change



2 Performance and conclusions

2.1 Outcome assessment

There has been good progress towards all three outcome areas with specific details captured in Table 1. The most significant progress was under Outcome Indicator 1b, which looks at funding invested in sanitation and hygiene projects influenced by SHARE. Contracting challenges (see Section D) have had some knock-on effects delaying the delivery of project outcome maps from all partners. A summary of progress against each indicator is given below.

SHARE has been successful in leveraging additional funds from the Australian Department of Foreign Affairs and Trade (DFAT) to support the dissemination of findings from [SuperAmma](#) in Bhutan (Outcome Indicator 1a). Project inception workshops in Bhutan this year were partially funded by SHARE and the funding from DFAT builds on this.

SHARE has also monitored funding invested in sanitation and hygiene projects influenced by SHARE (Outcome Indicator 1b) from several donors for work in India and Nepal:

- Vitol Foundation funding and private giving to support the Government of Nepal-led and WaterAid designed [pilot](#) on integration of hygiene messages into immunisation programmes. The funding supports the scale up of this pilot to a four-district demonstration project. This builds on work in Nepal during Phase I of SHARE.
- 3ie has funded an evaluation of women and girls' sanitation-related psychosocial stress: this work builds directly on two of the [SHARE India platform studies](#) from Phase I (using new methods and instruments developed) and combines investigators from two of the India platform teams who were brought together at SHARE India RIU meetings. The successful proposal itself cited SHARE work extensively and is led by LSHTM researchers.
- Funding from the United Nations Office for Project Services (UNOPS) and the Water Supply and Sanitation Collaborative Council (WSSCC) for follow-on research from SHARE Phase I on psychosocial stress of women and girls in India, which is led by researchers from Texas A&M University.
- Matched funding from the World Health Organization (WHO) building on [WASH & CLEAN](#) Toolkit work to produce a broader toolkit that looks beyond the delivery suite at healthcare facilities in general. This was the result of a request by the Government of India and SHARE will be contributing funds along with WHO. A small amount of additional funding is being sought to finalise this piece of work, potentially from UNICEF India.

Progress on outcome mapping (Outcome Indicator 2) has been slightly delayed, which means SHARE is not able to report for all partners. SHARE is confident that this work will be finalised shortly and all partners have been working on developing high quality outcome maps for their projects. Full reporting on this indicator will be available on a quarterly basis from autumn 2016 and will be fully reported in the 2017 annual report. Further information on the outcome mapping process, and monitoring and evaluation (M&E) processes are given in their respective output Sections in Section C.

Resourcing challenges around capacity development mean that capacity development and related M&E activities have been delayed - this is further discussed in Section C, Output 4.

Table 1: Progress towards outcomes

Indicators	Milestones	Progress
1a) Amount of funds invested by other donors in SHARE research (£)	Baseline: £6.4 million Year 1 target: £0.25 million	100,000 Australian dollars or approximately £50,689 was invested in SHARE research during the reporting period.
1b) Amount of funds invested in sanitation and hygiene projects influenced by SHARE (£)	Baseline: £80.8 million Year 1 target: £0.5 million	Approximately £703,254 ¹ was invested in sanitation and hygiene projects influenced by SHARE during the reporting period.
2 Percentage of progress markers met by recipients of funding, as indicated in the outcome mapping document developed for each partner	No baseline Year 1 target: 20%	It was only possible to generate this information for one partner as outcome maps are in the process of being finalised. This partner reached 15% of progress markers. Outcome maps and progress markers for all partners will be finalised shortly. A system and tools have been developed to ensure regular reporting on these in future.
3 Percentage of capacity development outcomes met by recipients of funding, as indicated in the capacity building strategy documents prepared by partners.	No baseline Year 1 Target: 20%	Capacity development was put on hold due to resourcing issues but plans are now in development. Systems and tools will be developed to improve future reporting.

1. These figures are approximate due to exchange rates and currency conversions from US dollars (\$) to British pounds (£).



WaterAid project inception meeting in Babati, Tanzania

2.2 Output assessment

There has been good progress towards most outputs, with some particularly strong achievements:

- High number of peer-reviewed publications produced during the reporting period from Phase I research
- Percentage of female authors increased by 13% from the baseline
- High number of event attendees (50% more than target)
- High number of translational outputs and online media produced
- Increased number of website views due to successful redesign
- Several SHARE-supported postgraduate students gained employment in the WASH sector
- High number of recommendations from the Consortium Advisory Group (CAG) addressed and responded to.

Key challenges relate to:

- Increasing the number of authors for low or middle income countries (LMIC) - this will be a priority for Phase II publications although we do not expect to see outputs from Phase II until later in the project cycle
- Capacity development outputs due to delays captured in Section D, Output 4.

2.3 Key lessons

- **Efficient and robust monitoring systems** must be created in order to use, analyse and respond to SHARE data.
- **Systems must be set up to enable SHARE's African partners to maximise country ownership** and their own and SHARE's sustainability. This responds to lessons learnt from Phase I and has been built on in Phase II with partners driving and leading on activities including stakeholder analysis, policy landscaping, outcome mapping and convening events such as symposia.
- It is critical to **maintain a stable and sustainable core of SHARE supported staff in country**. They may be seconded from an established organisation with a long-term strategy of research in the WASH sector. To act on this, SHARE has recently recruited a National Coordinator in Tanzania in partnership with the Ifakara Health Institute to ensure greater sustainability. For the same reason, SHARE has also embedded all Phase II projects in established African research institutes or universities.
- The **2015 external review undertaken by PwC** provided new and important insights and enabled key stakeholders. The process allowed partners to provide constructive feedback.
- It is vital to ensure **frequent communication with partners**, especially on progress related to contracting or funding arrangements.

“It was identified that there was a need to change the model of working. For Phase II this will change from country platforms to national partnerships.”

2.4 Key actions

- SHARE is in the process of recruiting a short-term consultant to support the delivery of work under Output 3. It is expected that they will support the finalisation of partner capacity plans and the delivery of activities.
- Over the next year SHARE will be taking a more strategic approach to achieving leveraged funding targets, including supporting partners to identify and access additional funding opportunities.
- SHARE is in the process of updating and finalising its impact assessment methodology and has produced an impact paper that will have been shared with DFID before submitting this annual report. This is in response to significant feedback and discussion on this topic as part of the PricewaterhouseCoopers (PwC) review.

2.5 Logframe updates

The logframe has gone through several minor revisions since the last annual review. This was to incorporate feedback from the external PwC review conducted in 2015, from the CAG meeting in December 2015 and to make other improvements. These changes mainly aimed to better define what is being measured, use consistent terminology throughout the document, and revise and refine targets.

Key revisions

- Using **ResearchOnline** (LSHTM's repository) to collect data on paper views/downloads rather than different journal websites (this is because journals have extremely varying and inconsistent ways of capturing this information that may not be time bound and it is challenging to capture in a consistent way).
- Adding an indicator to capture external events using SHARE resources that will indicate broader uptake of SHARE work within the WASH sector.
- Reducing the target for the percentage of authors from LMIC to be more realistic, and in line with existing publications (from 75% to 60%).
- Reducing the percentage target for female authors as it was felt that a 50/50 ratio of male/female authors was most desirable (from 75% to 50%).
- Updating leveraged funding baselines to show increased funding; these were previously under reported and improved M&E has enabled the SHARE team to correct these.
- Updating impact-level indicator figures according to updated data - the rationale, method and data sources are described further in Annex F.
- Adapting indicator 4.1 to reflect percentage partner satisfaction using Likert scale survey questions - this approach adds more depth and context to the information collected.

Smaller cosmetic changes include improved numbering of indicators, adding missing baseline figures, adapting targets due to additional information, including both number and percentage in several quantitative indicators, and changing the order of some indicators to make the logical framework clearer. A draft revised version has already been shared with DFID and the final updated logframe is included as Annex A to this document.

3 Output scoring

3.1 Research

Output 1: SHARE build new evidence and synthesises existing knowledge

Output number per LF: 1

Risk: Moderate

Risk revised since last AR?: Y

Impact weighting (%): 25%

Impact weighting % revised since last AR?: Y

Table 2: Output 1 Progress

Indicators	Milestones	Progress
1.1.1 Number of peer-reviewed publications on SHARE research	Baseline: 60 publications Year 1 target: 65 publications	There were 17 new publications in the reporting period, bringing the total number to 77 publications from SHARE and exceeds our target for this year.
1.1.2 Number and percentage of authors are from institutions in Low and Middle Income Countries	Baseline: 27% Year 1 target: 40%	20% of authors (98/479) were from LMIC countries. SHARE did not meet its target on this indicator. The change of partners for Phase II was designed to support national research outputs and will therefore result in higher numbers of LMIC authors as their research progresses.
1.1.3 Number and percentage of authors who are female	Baseline: 30% Year 1 target: 40%	43% or 207/479 authors were female. This exceeds our target of 40%.
1.2.1 Average number of downloads of each SHARE journal paper in a year, from the SHARE website	No baseline Year 1 target: 600 views/downloads for 1.2.1 and 1.2.2 combined	The SHARE website has been redesigned so it has the functionality to provide this data and it will be included in the next annual report.
1.2.2 Average number of views of each SHARE journal paper in a year, from Research Online		The average number of views for SHARE journal papers was 230. This covers 60 of SHARE's 77 papers as newer papers are not yet available on Research Online. This number is likely smaller than the target because it was not possible to include data from the SHARE website.

Key points

Building on Phase I research, five main studies have been commissioned under Phase II of SHARE covering three thematic areas: **pro-poor urban sanitation**, **WASH and childhood nutrition**, and **WASH and complementary food hygiene**. During this reporting period all five research protocols were peer reviewed, updated and signed off by the SHARE management group. Table 3 provides an overview of the studies.

Table 3: SHARE research projects

Project	Implementing partner	Country
The effect of a novel early childhood hygiene intervention on enteric infections and growth faltering in low-income informal settlements of Kisumu, Kenya - a cluster randomised controlled trial	Great Lakes University of Kisumu	Kenya
WASH and Hygiene of weaning foods	Malawi Epidemiology and Intervention Research Unit	Malawi
Mikonos Safi Study - Hand hygiene intervention to optimise helminth infections control: a cluster randomised controlled trial in NW Tanzania	Mwanza Intervention Trials Unit	Tanzania
Achieving universal access to adequate, sustainable and equitable sanitation and hygiene services in the Cities of Tomorrow	WaterAid	Tanzania
Creating demand for sanitation in peri-urban settlements	Centre for Infectious Disease Research in Zambia	Zambia

All of these projects underwent a rigorous but constructive process of peer review during the last year, culminating at the Partners' meeting in December 2015, at which they were all approved, subject only to contractual and minor issues. This process is essential in guaranteeing the quality of our research. It also constitutes a vital component of our capacity-building efforts, as the painful process of rewriting a proposal to take account of reviewers' comments is the most effective way of developing the skills to design high quality research.

It is not only effective, but cost effective, and represents a sustained effort to invest in quality in our current research and in developing capacity in our partners to render that quality sustainable.

These projects are all in early stages of implementation following some delays due to challenges in finalising SHARE's no-cost extension (NCE) and LSHTM contractual arrangements, see Section D. All projects are now moving forward, and; all but WaterAid's project are proof-of-concept trials.

Great Lakes University of Kisumu (GLUK) in collaboration with LSHTM, University of Oklahoma, University of Florida and ICDDR,B is developing and implementing a **child hygiene intervention** targeting caregivers of children at three months of age. The intervention will be delivered by community health volunteers at the household level during their routine work. GLUK has received ethical approval clearance and has held initial meetings with participating communities. Next steps will

include conducting baseline surveys at the two sites and collecting formative behavioural data for the ‘Safe Start’ intervention. Staff will also begin recruiting community health volunteers and eligible households for the sample.

Malawi Epidemiology and Intervention Research Unit (MEIRU)’s work focuses on the **impact of community-based WASH and food hygiene interventions** on diarrhoeal disease incidence in children under five. A contract has been signed with MEIRU for the research, and they have signed an enabling agreement with the Polytechnic, University of Malawi. The fieldwork will begin in June 2016, and the team in Malawi have submitted the protocol to the College of Medicine Research Ethics Committee (COMREC) for approval. While awaiting this approval, the team have been preparing for the necessary recruitment, procurement and training needed for the formative research to begin. The Principal Investigator (PI) and Co-PI have continued to increase awareness of the planned research and associated capacity building to existing and prospective partners through national and regional events. This has included a session on tackling undernutrition through WASH at the International Federation of Environmental Health (IFEH) **14th World Environmental Health Congress** in May 2016. Next steps will include the purchase of the necessary capital items, setting up mobile data collection systems, and establishing a research advisory group.

Mwanza Intervention Trials Unit (MITU) is undertaking a **proof-of-concept trial** to establish how effective a high intensity hand hygiene intervention after deworming can be in reducing both intensity and prevalence of selected helminth infections. Staff have established collaborative links with health and education authorities in Kagera Region in support of their trial. They have also set up arrangements for collaboration with the University of Oklahoma with Dr Robert Dreibelbis as co-investigator; Dr Dreibelbis is an anthropologist and behavioural scientist with long-standing experience in WASH-related research. He is guiding the team in the conduct of formative research to design details of the behavioural component of the intervention study. The collaboration is designed to generate capacity at MITU and the National Institute for Medical Research (their partner institution in Tanzania) in this important qualitative research area. MITU has also conducted a preliminary survey on helminth prevalence at 19 selected schools in Kagera, and has recruited a national RIU coordinator who started work in June. This role has been created as a joint appointment with the Ifakara Health Institute, increasing the potential capacity of the role and collaborative elements in the national programme in Tanzania. Next steps for MITU will include submitting applications for ethical approval, finalising the protocol for formative research and shortlisting schools.

WaterAid’s research into **achieving universal access in the cities of tomorrow** will use a participatory city-wide planning process in the town of Babati, Tanzania, to demonstrate the conditions under which towns and citizens can co-produce and implement sanitation plans that deliver inclusive and sustainable services to all. WaterAid advertised for research institutions and universities in Tanzania to indicate their interest in becoming the national research partner. The Nelson Mandela African Institute of Science and Technology (NM-AIST)

17
new publications

13
citations per journal paper

43%
of journal paper authors were women

20%
of journal paper authors were from LMIC

was selected as the preferred national research partner. A similar call seeking international consultants was issued in the UK, and a decision was made to recruit on a case-by-case basis to support NM-AIST as the need arises. WaterAid also conducted a series of start-up/inception workshops in April/May 2016 in Arusha, Babati and Dar es Salaam.

The Centre for Infectious Disease Research in Zambia (CIDRZ)'s work focuses on **creating demand for sanitation in peri-urban settlements**. They are designing a novel household-based intervention in urban Lusaka looking at the proportion of households who upgrade their latrines from unimproved to improved within three months of the intervention. CIDRZ held an inception workshop in Lusaka in May with participants from LSHTM in attendance. It has also executed three call-down agreements and has identified and engaged with key WASH stakeholders. Next steps will include development and submission of protocol and data collection tools, ethical clearance and preparations for data collection.

SHARE is also planning to fund two smaller studies under Phase II. Building on a study in India co-funded by SHARE and WSSCC in Phase I, SHARE is funding a **study in southern Tanzania** that will explore women and girls' sanitation vulnerabilities. Applying the evolving understanding of gendered impacts of inadequate water and sanitation services, and using mixed methods, the study will: 1) examine the gender-specific water and sanitation needs of women and girls through specific life stages; 2) explore the impact of inadequate and/or constrained access to water and sanitation on psychosocial stress, violence, education, and drudgery; and 3) adapt and apply measures of sanitation-related distress and water insecurity among a sample of women and assess relationships with international standard measures of psychosocial distress and quality of life.

In Zambia it is likely that SHARE will co-fund a study by CIDRZ on WASH and vaccines. The research, which builds on a study funded by the Bill and Melinda Gates Foundation (BMGF) in 2011, plans to use stored stool samples from a cohort of children under the age of 5 to evaluate:

- Viral, bacterial, and protozoal aetiologies of moderate-to-severe diarrhoeal infections.
- Detection of these pathogens among rotavirus vaccine-immunised and non-immunised children who presented with diarrhoea, and among control children without diarrhoea.
- Prevalence of key stool and serum markers of enteric dysfunction and the effect of these on vaccine-induced seroconversion.

The study is expected to feed into explanations on vaccine effectiveness thereby paving the way for the evaluation of vaccines and therapies that target the identified enteric pathogens to address diarrhoea-related child mortality in this region. The study is estimated to cost around £300,000 of which SHARE can provide half. In the coming months SHARE will be looking to identify a suitable co-funder.

The two national research platforms have also made progress over this reporting period. In Malawi the National Coordinator, Dr Tracy

Morse, has been leading the development of a research agenda. The draft agenda has built on discussions during the national symposium last year and is likely to fund two to three additional studies and a series of small studies led by national MSc students. This funding will also be used to improve advocacy and national and international relations, including engaging in national sanitation hygiene coordination meetings. In Tanzania, MITU with the support of the SHARE core team recently recruited Donat Shamba as the National Coordinator, who in the coming months will be developing the country platform research agenda and supporting partner RIU activities.

Summary of responses to issues raised in previous annual reviews

PwC highlighted the importance of focusing on legacy arrangements for Phase I research now that the programme has transitioned into Phase II, particularly for India and Bangladesh. As noted in Section B, Annual outcome assessment, SHARE has successfully leveraged funds for a number of its Phase I investments to continue to progress beyond SHARE involvement. SHARE has also supported new research informed by evidence generated under Phase I. In Bhutan, SHARE funded an inception workshop for the adaptation of SuperAmma, which will be delivered as part of a government-led national hygiene campaign. In India, SHARE is supporting the Public Health Foundation of India to modify the WASH & CLEAN labour ward assessment tool to be more applicable to outpatients departments; this was at the request of the Government of Gujarat.

Building on the Phase I [Sanitation-Related Psychosocial Stress \(SRPS\) study](#) conducted in India, SHARE has committed to funding a small study in Tanzania to provide some comparison in Africa where, to date, no research has been undertaken on the topic. It is gratifying to report that since the completion of SHARE's funded work in India, WSSCC have contributed an additional US\$50,000 towards studies of psychosocial stress of women and girls in India.

PwC also noted that SHARE should be prioritising research proposals that have a very clear link to on-the-ground implementation with large scale-up potential. SHARE has addressed this in Phase II in particular with research projects focusing on complementary foods, deworming and sanitation demand. However, it is also still relevant to focus on fundamental work to fill current gaps in knowledge and SHARE has indeed always focused on what partners themselves propose as research themes. SHARE has ensured that new research proposals include plans for scaling-up outcomes.

Recommendations

Going forward the SHARE core team will support more strategic engagement between research partners, especially those undertaking formative research to share methods, data collection tools and findings. Discussions have already begun between the two most similar studies which are being undertaken by GLUK and MEIRU.

3.2 Research into Use

Output 2: SHARE disseminates and communicates research to encourage uptake of policy and programming

Output number per LF: 2

Risk: Minor

Risk revised since last AR?: N

Impact weighting (%): 25%

Impact weighting % revised since last AR?: Y

Table 4: Output 2 progress

Indicators	Milestones	Progress
2.1 Percentage of RIU activities completed by funding recipients in their outcome mapping document	No baseline Year 1 target: 30%	18/29 planned RIU activities for late 2015 and 2016 were completed - or 62% of planned RIU activities. This represents three partners as two partners did not have outcome maps complete with specified RIU activities at the time of reporting. All partners will be included in the 2017 annual report.
2.2.1 Number of attendees at SHARE knowledge sharing events (including disaggregated at a gender level).	Baseline: 848 attendees. 262 attendees were women. Women represent 52% of total attendees for those events that had gender disaggregated data available. Year 1 target: 300 attendees	There were 657 attendees at 9 SHARE events during the reporting period. Gender disaggregated data was available for 5 of these events for which 85/197 (43%) attendees were female. This does not represent all attendees at all 21 SHARE events held during the reporting period as it was not monitored consistently. New tools have been developed to capture this data for all SHARE events.
2.2.2 Number and percentage of attendees of those events that report they found them to be useful in improving their knowledge	No baseline Target: 30%	98% of attendees reported they found the event to be useful in improving their knowledge. This represents three SHARE events (WASH and nutrition workshop at IFEH, WASH and nutrition workshop in Brisbane WASH in healthcare settings in Brisbane) as tools were only recently developed to monitor this. These tools are now being used to capture this data for all SHARE events.

<p>2.2.3 Number of external events using SHARE resources</p>	<p>No baseline No target because this is outside our sphere of influence but this is a good measure of research uptake by key stakeholders.</p>	<p>There was 1 external event using SHARE resources during the reporting period - a presentation at WEDC 2015 which referenced SHARE's equity research</p>
<p>2.3 Number of recipients of SHARE technical assistance</p>	<p>Baseline: 29 Year 1 target: 10 new technical assistance requests</p>	<p>There were 7 technical assistance requests during the reporting period. While there were direct recipients of technical advice, there are likely many more indirect recipients due to the nature of the requests. For example one request was to contribute to the development of Tanzania's National Nutrition Policy which could have wide-reaching impact.</p>
<p>2.4.1 Number of translational outputs arising from SHARE research, as indicated in the list of content type on the resource pages of SHARE website.</p>	<p>Baseline: 163 (80 reports and manuals, 83 media outputs) Year 1 target: 10 new translational outputs</p>	<p>There were 34 new translational outputs in the reporting period and 23 new online media outputs. The translational outputs cover 7 briefing notes, 8 reports, 3 policy briefs, 3 videos, 1 toolkit, 1 poster and 1 infographic. This has exceeded our target bringing our total number of translational outputs to 194 and our number of media outputs to 101 (total 295 outputs).</p>
<p>2.4.2 Average monthly number of views of SHARE website</p>	<p>Baseline: 2,666 Year 1 target: 3000</p>	<p>The average number of views per month before the website relaunch was 2,058 and after was 3,777 per month. The overall average was 3,119 views per month. The website had 6,466 views in October due to the successful relaunch. It is likely that monthly website views will stabilise at around 3000 a month.</p>
<p>2.4.3 Number of translational outputs downloaded from the SHARE website.</p>	<p>No baseline Year 1 target: 690</p>	<p>This data was unavailable due to lack of technical functionality on the website during the reporting period - this function is now working and 2.4.3 will be reported in the next annual report.</p>
<p>2.5 Citations by other authors of SHARE I and II publications (expressed in average number per article)</p>	<p>Baseline: 11 average citations per paper Year 1 target: 11</p>	<p>The average number of citations per paper is 13. This covers 73 of SHARE's 77 papers as citation data is not available for all papers</p>





657
attendees
at SHARE events

Key points

Research into use (RIU) is a critical pathway in SHARE's overarching Theory of Change (Figure 1). As detailed in the RIU strategy, five approaches are used to ensure SHARE evidence is relevant, accessible and used.² To support the delivery of the strategy, outcome maps have been developed at the thematic (global) and project level to inform RIU activities in these five areas. As highlighted in Table 4 achievements under this stream of work are measured by Output 2 of the logframe. During this reporting period almost all output indicators were met, and many exceeded targets. Details of key achievements against the logframe targets are provided in the narrative below. Annex G also highlights the success stories of RIU in the five thematic areas: gender, violence and WASH; maternal and newborn health and WASH; behaviour change; vaccines and hygiene promotion; and complementary food hygiene and nutrition.

SHARE has continued to take advantage of international and national conferences to present evidence from Phase I, as well as engage and influence the discourse in the WASH and health sectors. Over the past year SHARE has presented evidence on WASH and nutrition, WASH and complementary feeding, and WASH in health-care facilities. This have been delivered in partnership with consortium partners, WHO, UNICEF and national governments. Key conferences have been: the **2015 WASH Nutrition Forum** held in Bonn, which for the first time brought together the two sectors to deliberate ideas for working more coherently; and the **43rd Annual National Conference of the Indian Association of Preventive & Social Medicine**, where policymakers expressed great interest in adapting the WASH & CLEAN Toolkit for outpatient departments to be used as part of their new national programme. Table 5 provides a summary of key events SHARE has actively engaged in over the past year.

98%
of SHARE event
attendees reported
finding the event
useful for learning
new information
and improving their
knowledge



² (i) Convening boundary partners/users, (ii) RIU-led research and synthesis, (iii) translation of research for boundary partners/users, (iv) projection of work through online and other means, and (v) support to the national platform processes.

Table 5: Key SHARE events

Event	Activity	Audience
Stockholm World Water Week, Sweden, 2015	SHARE co-convened three events on: Water, gender and distress; WASH in nutrition; and Scaling-up sanitation microfinance	Experts, practitioners, decision-makers (including national governments), academics and business innovators
University of North Carolina Water and Health Conference, United States, 2015	SHARE supported three presentations and five side events. Topics covered included: maternal and newborn health, menstrual hygiene management (MHM), gender, neglected tropical diseases (NTDs), and complementary food hygiene	Academia, governments and policymakers and donors from the WASH and health sectors
Global Maternal Newborn Health Conference, Mexico, 2015	SHARE hosted a discussion panel on WASH and maternal and newborn health integration	Academia, governments and policymakers, donors, civil society and practitioners from the WASH and health sectors
43rd Annual National Conference of the Indian Association of Preventive & Social Medicine, India, 2015	WASH in healthcare facilities (HCFs) (side session co-convened by WHO) SHARE supported several of our researchers to attend and present at the conference, and co-sponsored, with WHO, a session on 'WASH in Health Care Facilities	Public health experts and researchers from across India
Emergency Environmental Health Forum, Kenya, 2015	SHARE presented on Water supply interruptions and suspected cholera incidence, and The impact of water, sanitation and hygiene interventions to control cholera	Practitioners from humanitarian/emergency organisations with an expertise in WASH including Médecins Sans Frontières, Care, the International Rescue Committee, UNHCR, UNICEF, the Red Cross, Oxfam and Action Contre la Faim
Bonn WASH and Nutrition Conference, Germany, 2015	WASH and undernutrition: Overview of the evidence (presentation)	Academia, governments and policymakers, donors, civil society and practitioners from WASH and nutrition sectors
14th World Environmental Health Congress, Malawi, 2016	Co-convened session with MEIRU on Tackling undernutrition with WASH	Environmental health practitioners, NGOs, governments and civil society
European Development Days, Belgium, 2016	Co-convened a sessions on WASH and nutrition policy analysis	EU donors, NGOs and governments

SHARE has also been busy within its focus countries. In July and August 2015 respectively, SHARE supported its partners in Malawi (MEIRU) and Tanzania (MITU and WaterAid) to hold national symposia that brought together key potential research users from the sanitation and associated sectors to present and discuss the research proposed as part of Phase II. By engaging research users (academics, policymakers, campaigners and practitioners) from the outset of the process, these events - reports on which can be read online: [Malawi](#) and [Tanzania](#) - sought to strengthen and foster greater interest in SHARE research, thereby hopefully laying the groundwork for future uptake of the findings into policy and practice at the national, district and local levels. The turnout at both was excellent, with representatives from ministries of health and water, DFID, and prominent NGOs in attendance.



Participants at the 2015 National Sanitation and Hygiene Research Symposium held in Lilongwe, Malawi

In October 2015, SHARE and the Interagency WatSan Group co-convened the [6th Emergency Environmental Health Forum](#) in Kenya, which brought together experts from organisations such as Médecins Sans Frontières, Care, the International Rescue Committee, UNHCR, UNICEF, the Red Cross, Oxfam and Action Contre la Faim to exchange recent field experiences - particularly relating to the 2014/15 Ebola virus outbreak - and explore new approaches to action and intervention in the WASH sector.

Building on relationships established in Phase I, we have continued to work closely with sector leaders such as UNICEF and WHO. SHARE's memorandum of understanding with UNICEF has resulted in a number of key outcomes, proving mutually beneficial to both parties. In January 2016, Sanjay Wijesekera, Chief of Water, Sanitation, and Hygiene at UNICEF, presented a [guest lecture at LSHTM](#) on the transition from the MDGs to the Sustainable Development Goals (SDGs).

SHARE has continued to support global efforts to drive WASH in Health Care Facilities (HCFs) action plans, co-hosting a [four-day global meeting in London](#) in March 2016 and a full-day of training at the Brisbane WASH Futures Conference in partnership with WHO, WaterAid and UNICEF. SHARE is also a member of two of the global tasks teams through which it has input into the development of the new 'WASH FIT' facility assessment tool and the global monitoring indicators for WASH in HCFs.

RIU-led research and synthesis

A key output during this reporting period was the ‘Evidence review on the impact of WASH on children’, disseminated to all UNICEF programme staff. The review provides a summary of the evidence on links between WASH and child health. A summarised version of the review will be produced for use within DFID in the coming months.

The SHARE-funded [Cochrane Review on WASH and nutrition](#), published in 2013, continues to be an important resource for the sector. Over the last year it was reported that ACF International and UNICEF have both used the review to inform their new global strategies. SHARE has also inputted into the new WASH and Nutrition operational manual, commissioned by ACF International, which will be available online in the coming months. The manual will be a valuable resource for practitioners designing integrated programmes.

Over the last year SHARE partners have produced a total of 77 publications detailing evidence from Phase I research. These papers are proving to be important references for the WASH and health sectors, cited on average 13 times per paper. SHARE has continued to invest in the synthesis of this and other evidence. For example, in the *Journal of International Health* we co-authored the paper *‘Integration of water, sanitation and hygiene for the control of neglected tropical diseases: a review of progress and the way forward’*. We have also contributed to the ‘Stop Stunting in South Asia’ special issue in the *Journal for Maternal and Child Nutrition*, which was launched in India in May this year, co-authoring the paper *‘Can water, sanitation and hygiene help eliminate stunting? Current evidence and policy implications’*. SHARE’s Research Director, Professor Sandy Cairncross, also contributed to the [Parliamentary Office for Science and Technology research briefing on access to Water and Sanitation](#), which discusses the challenge of increasing access to water and sanitation in the context of the SDGs. Annex H presents an analysis of bibliometrics citation data on SHARE publications.



Translation and projection of research

SHARE continues to produce a range of informative translational and online media outputs (the definitions of which have been altered during this reporting period to reflect amendments to the logframe), which synthesise SHARE research into accessible formats for policymakers, practitioners and the media to foster uptake. This year, SHARE has produced **34 new translational** and **23 new online media outputs**. Those that have been of particular interest to WASH and other sectors include:

- Our ‘**Impact of Poor Sanitation on Nutrition**’ policy brief, which has been listed as a key resource on cross-sectorial integration in an ePaper produced following the Bonn WASH and Nutrition Forum, and received engagement on Twitter.
- Our ‘**Undernutrition and WASH**’ policy brief which has been included as one of the Sustainable Sanitation Alliance’s WASH & Nutrition Forum’s top five reads for those new to the WASH-nutrition nexus and was used as a background resource for the Bonn Forum.

SHARE has continued to strive to create innovative and visually appealing outputs. As such, this year SHARE has produced its **first-ever infographic** (summarising the MEIRU-led Phase II study) and is particularly proud of its recently-published ‘**Synthesis Report**’, which offers a succinct and visually accessible overview of the breadth of work undertaken by SHARE during Phase I (2010-2015). It presents some of SHARE’s key successes, particularly highlighting the impact its innovative research, capacity-development activities and RIU efforts have had in shaping sanitation and hygiene policy and practice globally. It is hoped that the case studies included will inspire others working in similar consortia and we have thus far received very positive feedback from DFID and other external stakeholders.

Translational outputs produced pre-July 2015 continue to gain traction among our target audiences. Examples include:

- Our ‘**European WASH and NTDs Roundtable**’ event report featuring in WHO’s new WASH and NTDs Global Strategy.
- Our ‘**Complementary Food Hygiene**’ policy brief featuring in WHO’s ‘Improving Nutrition Outcomes with Better Water, Sanitation and Hygiene’ report.
- Our ‘**Compendium of Accessible WASH Technologies**’ forming the basis of the Government of India’s new ‘Handbook on Accessible Household Sanitation for People with Disabilities’.

In an effort to further increase the accessibility and reach of SHARE’s resources, SHARE’s RIU Officer has overseen the complete overhaul of the SHARE website this year. This was a lengthy process during which substantial feedback was sought from a range of users and the content of the entire site was reviewed and where appropriate, streamlined. The **new website** was launched in October 2015 and early indications suggest it has been highly successful in terms of increasing traffic and time spent on the site. Before the website relaunch the average



34
new
translational
outputs

23
new online
media outputs



number of views per month was 2,058 and after it was 3,777, with 6,466 views in the relaunch month, October.

SHARE has also continued to strengthen its other online dissemination channels. In the reporting period, **newsletter** subscriptions have increased by 6% to 680 monthly recipients, and our **Twitter** followers have also grown by 28%. Importantly, our ‘social authority’ on Twitter has increased by 38% signifying that the content we are producing is effective and its influence is continuing to grow. By tracking online discussions, Twitter, news websites, media sites, blogs and social media, Altmetric has captured the impact of some of our and our partners’ work in this space. Very positively, during this reporting period thirteen SHARE-funded publications are in the top 5% of all publications ever listed on Altmetric. The top four are as follows:

- **Burden of disease from inadequate water, sanitation and hygiene in low- and middle-income settings: a retrospective analysis of data from 145 countries** received an Altmetric score of 330. It was tweeted by 654 people around the world as well as picked up in news outlets, blogs and two WHO policy documents. See Figure 2 for a visual.
- **Effect of a behaviour-change intervention on handwashing with soap in India (SuperAmma): a cluster-randomised trial** received an Altmetric score of 163. It was mentioned by 9 news outlets as well as being picked up by multiple blogs and social media including Twitter, Facebook and Google Plus.
- **Effectiveness of a Rural Sanitation Programme on Diarrhoea, Soil-Transmitted Helminth Infection, and Child Malnutrition in Odisha, India: a Cluster-Randomised Trial** received an Altmetric score of 146. It was featured in a World Bank blog as well as being featured on several news outlets, other blogs and Twitter.
- **From Joint Thinking to Joint Action: A Call to Action on Improving Water, Sanitation, and Hygiene for Maternal and Newborn Health** received an Altmetric score of 129. It was mentioned in a Guardian article on maternal health, in a WHO policy document and on social media.

38%

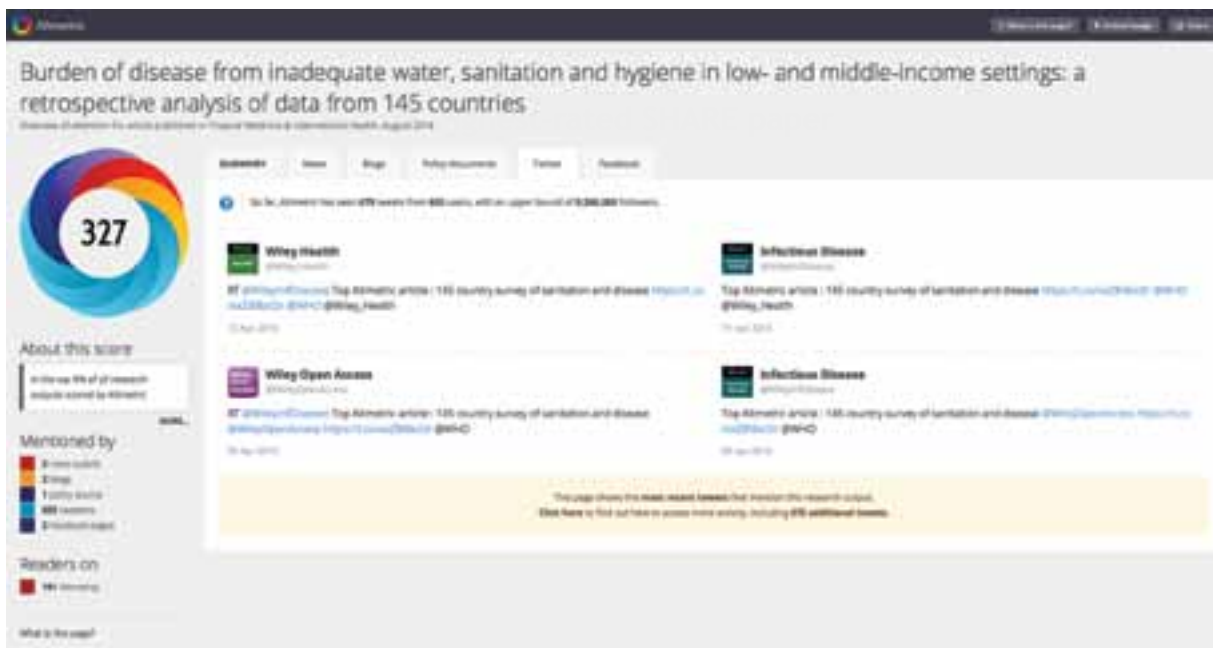
SHARE’s ‘social authority’ on Twitter has increased 38% this year.



84%

Monthly views of SHARE’s website have increased 84% since the relaunch.





Recommendations

RIU continues to promote SHARE research and other activities well and no changes to the strategy are recommended for the next year.

3.3 Capacity development

Output 3: SHARE develops the capacity of key stakeholders in the WASH sector and other related sectors

Output number per LF: 3

Risk: Major

Risk revised since last AR?: Y

Impact weighting (%): 25%

Impact weighting % revised since last AR?: Y

Table 6: Output 3 Progress

Indicators	Milestones	Progress
3.1.1 Number of attendees at SHARE training sessions (including disaggregated at gender level).	Baseline: 491 Year 1 target: 50 new attendees	43 attendees (of which 13 were women) at WASH in Healthcare facilities training at WASH Futures Conference 2016, Brisbane.
3.1.2 Number and percentage of those attendees that report using at least one aspect of the training in their day-to-day work at least one month after completing the training	No baseline Year 1 target: 15%	Capacity development M&E was put on hold this year due to resourcing gaps. Processes and tools will be developed to monitor this regularly in 2016/2017
3.2 Number and percentage of research partners reporting that their experience working with SHARE has developed their research capacity	No baseline Year 1 target: 45%	Capacity development M&E was put on hold this year due to resourcing gaps. Processes and tools will be developed to monitor this regularly in 2016/2017
3.3 Number and percentage of SHARE-supported postgraduate students who gain employment in the WASH sector post-graduation	No baseline Year 1 target: 20%	4/6 SHARE funded PhD students - or 67% - are now working in the WASH sector. The remaining 2 are still working on their PhDs.

Key points

As DFID are aware in December 2015 SHARE tragically lost a great colleague and friend Dr Jeroen Ensink, Jeroen led SHARE's capacity development work and played an important role on the SHARE management group plus much more. His work has been taken on by various member of the SHARE core team but is currently off track.

A new SHARE Capacity Development Strategy, focused largely on our new research partners, was developed during 2015, and shared with the partners at the end of the year. Each partner was asked to respond to it in terms of their capacity development requirements relevant to the study in hand. Given the relatively short timescale to the end of the extension, implementation of the strategy will be largely

demand-driven during this year and focused on the SHARE legacy thereafter. As noted earlier in this report, the lengthy process of peer review carried out this year constituted an important contribution to capacity building in its own right.

Key achievements during this reporting period include providing technical support to UNICEF in multiple forms including writing technical guidance (UNICEF Pakistan) and delivering presentations (UNICEF Maldives, UNICEF HQ and UNICEF East Africa Region), as well as re-hosting the ‘Evidence-based WASH Policy and Practice’ lecture series. Attended by 36 senior and mid-level staff, 80% of participants said the course has changed their views on research for the better, and over 90% of participants reported they would recommend the course to colleagues. SHARE has also hosted two training events at Brisbane WASH Futures (May 2016). The full-day ‘WASH in HCFs’ training delivered in partnership with UNICEF, WHO and WaterAid brought together for the first time practitioners from across the globe to learn more on the issue. In addition, SHARE also supported a half-day of training on WASH and nutrition. At both training events SHARE played an important role in presenting an overview of the evidence.

SHARE continues to support two PhD students who are in the process of completing (Sheilah Simiyu and Parimita Routray). Since successfully defending his PhD dissertation in April 2015, Dr Prince Antwi-Agyei has been working at SHARE/LSHTM on the evaluation of Tanzania’s National Sanitation Programme and also on a new LSHTM project on ways of expanding the lifespan of pit latrines in urban settings. As an expert in his field, he is also a reviewer for two WASH journals. Dr Om Prasad Gautam has taken on the role of Technical Support Manager for Hygiene at WaterAid UK since completing his PhD and has been asked to serve as an independent reviewer for international peer-reviewed journals. WaterAid created this position to better build hygiene into their work and this therefore represents an important shift in WaterAid’s approach. Dr Tarique Md Nurul Huda is now working at ICDDR,B as an Assistant Scientist in the Environmental Interventions Unit where he is working on an exciting new project integrating WASH with child and maternal nutrition. Dr Richard Chunga has been supporting WaterAid Malawi in carrying out a national WASH context analysis. The results of this work will be used by WaterAid Malawi to develop a five-year WASH country strategy.

The appointment of a SHARE Research Fellow by each of the African partners will take place during the second half of 2016. As with other capacity development plans, this recruitment has been delayed due to the death of Dr Jeroen. One Fellow has been identified in Malawi and the contract process has been started.

All partners have developed and submitted capacity building plans to SHARE. Activities fall into several core activities such as support to Masters and PhD students through courses, laboratory skills training from other partners within SHARE, and small research project funds; mentorship training; grant management training for researchers and partner institutions; specialist software licences, and activities to encourage interest of engineering students in WASH issues through a short funded research call.

“The event gave me a new perspective in thinking about how the WASH work we do every day already converges with nutrition.”

Participant at SHARE training at Brisbane WASH futures 2016

Summary of (relevant) responses to issues raised in previous annual reviews

PwC recommended that SHARE increase investment in MSc degrees in order to broaden the scope and number of researchers within SHARE's research projects. SHARE will continue to support MSc students, but will not increase its investment in Masters as a strategy for capacity development in Phase II. This is because experience has shown that MSc students often move onto other sectors and their knowledge and skills are not necessarily retained.

Recommendations

SHARE is in the process of recruiting a short-term consultant to support the delivery of work under this output. It is expected that they will support the finalisation of partner capacity development plans and the delivery of activities.

3.4 Management

Output 4: The SHARE consortium in efficiently and effectively managed

Output number per LF: 4

Risk: Moderate

Risk revised since last AR?: Y

Impact weighting (%): 25%

Impact weighting % revised since last AR?: Y

Table 7: Output 4 progress

Indicators	Milestones	Progress
4.1 Percentage satisfaction of SHARE executive group member engagement in planning and decision making.	No baseline Year 1 target: 50%	67% partner satisfaction with engagement in SHARE planning and decision-making. This takes an average figure from two survey questions - the survey found that 63% satisfaction with engagement in SHARE planning processes and 71% satisfaction on decision-making ² .
4.2 Attendance rates of SHARE executive group meetings by research coordinators.	Baseline: 89% Year 1 target: 90%	The average attendance rate for Executive Group (EG) meetings is 81%; this reports on four EG meetings held during the reporting period.
4.3.1 Number of formal recommendations from CAG meetings addressed by MG and Country Partners	No baseline Year 1 Target: 100%	13 / 17 recommendations or 76% were addressed. The rest will be addressed and actions are in progress.
4.3.2 Number of formal responses from Management Group and country partners to CAG recommendations from each CAG meeting.	No baseline Year 1 target: 1	6 recommendations have been formally responded to. The remaining 11 will be formally responded to at the July 2016 CAG meeting.
4.4 Number and percentage of SHARE research projects tracking to agreed budget and timelines	No baseline Year 1 target: 50%	100% or 5 partners are tracking to budget. 40% or 2 partners are tracking to timeline.

Key points

Progress generally meets or is extremely close to meeting Year 1 targets. A recent management survey was used to determine SHARE Executive Group members' feelings on governance mechanisms, planning processes, decision-making and communications. A final report with recommendations will be shared with the Management Group and all survey participants in order to close the feedback loop and ensure that any appropriate follow-up actions are taken. This will be reported to the Consortium Advisory Group in their next meeting on 6th July 2016.

Expected changes to the management team and core team have been handled well and there has been a smooth transition, especially in the case of the increased role of the new Monitoring and Evaluation Officer, where there has been a rapid and discernible beneficial effect.

Summary of responses to issues raised in previous annual reviews

The PwC review recommended that the SHARE team continue to review how roles and responsibilities of the various groups may need to adapt with Phase II and the change of geographical focus. In response to this, CAG membership was reviewed for Phase II and governance structure was discussed and agreed at the partner and CAG meetings in December 2015. It will be reviewed again at the CAG meeting in Tanzania in July.

Recommendations

Indicator 4.4 will be split into two indicators (one on tracking to agreed budget, and one on tracking to agreed timelines) so it can be measured more accurately in future.

4 Value for money and financial performance

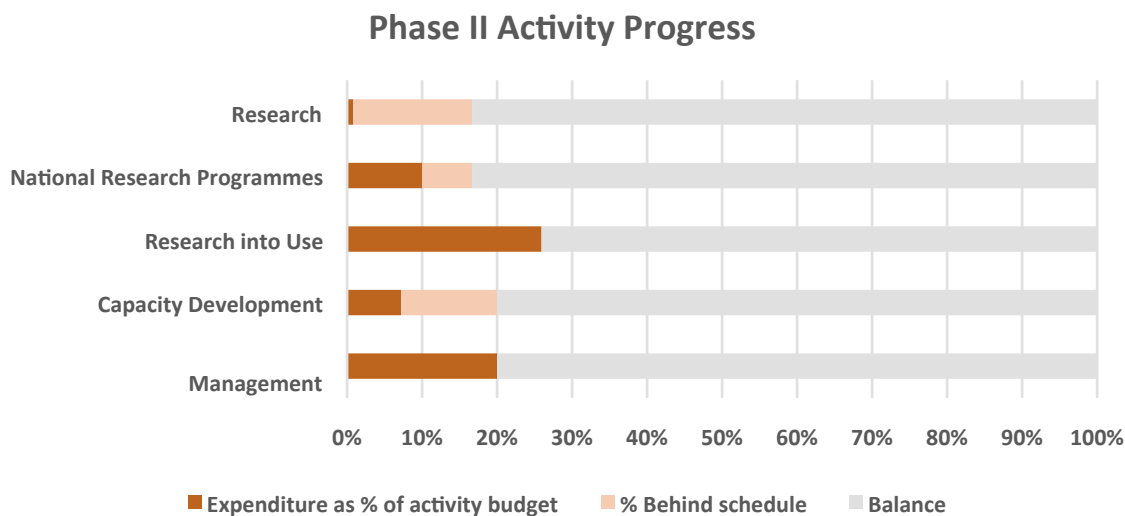
4.1 Key cost drivers

Key cost drivers for Phase II are contract and commissioned research projects, staff costs, capacity development activities such as courses and training, research uptake, travel and subsistence. The total budget for SHARE is £15,890,000, and cumulative spend to 31st March 2016 was £11,549,214.

The period since the last annual report has been challenging for SHARE, the circumstances of which are described below and in the overview. Performance has therefore varied from its norm of between 0-4% variance against forecast, to 0-13%. SHARE continues to maintain dedicated financial resources though they have been stretched particularly during the last six months. Interactions with DFID continue to be close and supportive, and DFID is kept informed of any potential changes.

The accounting period runs from 1st April 2015 to 31st March 2016, and all figures are related to the period unless otherwise indicated. Figure 3 shows the five key activities that drive costs, each with progress and variance against expected performance to 31st March 2016. The narrative that follows describes the performance of each of the five activities.

Figure 3: Phase II activity progress



Research: expected expenditure 20%; actual expenditure 1%

Despite being the largest contributor to performance, this activity has only started to produce outputs in the last quarter of the financial reporting period as the result of two delays. The first came from a review of the research theme protocols, with the Executive Group agreeing to extend the deadline for submissions from April to September 2015, with final acceptance taking place at their meeting in December. This allowed the principal investigators time to address issues raised through the review process. The second delay centred on contract delivery. There has been a recurring issue with contract backlogs in the Research Operations Office at LSHTM, which resolves periodically. Together with a wait for DFID's contract amendment at the beginning of 2016, this caused long delays in starting the research projects. The situation at LSHTM has recently eased and all research contracts have now been issued.

Responsibility for managing the research calls belonged to the Capacity Director, and his sudden death in December 2015 was not only a shock that took time to assimilate but stalled the research project process until an interim measure was put in place in January 2016.

National research programme: expected expenditure 20%; actual expenditure 12%

The national research programmes operate in the two core countries of Malawi and Tanzania though support is also provided elsewhere as required. While some activities were able to progress during the period, most are related to the research projects or activities around them, and therefore have been delayed.

Capacity development: expected expenditure 25%; actual expenditure 9%

Developing the research protocols was the key capacity development activity planned for the start of Phase II and therefore took precedence over other capacity activities through the first three quarters, although some other small activities were still also able to go ahead. The efforts of the capacity director and partners were therefore concentrated in achieving the standard required for sign-off of the protocols. In addition, to support their research and to provide sustainability within the national sector, partners presented capacity development plans at the end of 2015. Contracts for the programmes are now in place and activities will take place over the duration of Phase II.

Research into Use: expected expenditure 35%; actual expenditure 35%

Research into use performed well, and was relatively unaffected by delays in contracting. As the RIU work plan spans SHARE's activities past, present and future, there has been scope for the team to maximise uptake of Phase I activities during the contract delays affecting the research.

Management: expected expenditure 25%; actual expenditure 25%

There were a number of changes to SHARE's management and core teams during the period. The death of the Capacity Director hit an essential part of the programme but it also changed the balance of expertise in the management team. As an interim measure the Capacity Director's responsibilities were split between members of the Management Group, and a former member of the team from Phase I stepped in for three months to help bring the research protocols to contract. Other staff changes during the period were the recruitment of a new M&E Officer, and maternity cover for the Policy Research Manager. These were well planned for and the handover periods for both roles ensured a smooth transition.

The medium and long-term solutions for covering capacity development responsibilities are planned to come from a review of the role followed by recruitment. From 1st June some of the responsibilities have been reassigned to the CEO, and the rest filled through a short-term consultancy for which a number of people have been approached. The longer-term solution involves LSHTM recruitment of a member of staff with the expectation that 30% of their time will be spent on SHARE; recruitment is expected for the autumn term 2016.

SHARE's forecast expenditure for the period was reduced due to delays in the submission of the research protocols, and signing of sub-contracts, though with the move to milestone payments partners have had more control over planning staff and resources. The benefit for the finance and management team is better forecasting though a default on deliverables can create a bigger variance in expenditure as the invoices as larger and less frequent.

While the contracting issue has been resolved, the question is how long will it take the research projects make up the time; the crucial period in determining this will be Q3 and Q4 of 2016 when the first planned activities take place. Assuming that work then progresses as expected, the payment profile should be back on track by April 2017.

4.2 Value for money performance

DFID's aim of capitalising on SHARE's emerging successes was detailed in the VfM proposition for Phase II. This was captured in three objectives:

1. Capitalise on research insights from existing work to maximise VfM and support scaling up
2. Scale up results through targeted work with national programmes
3. Strengthen the capacity for sustained global sanitation and hygiene research by southern researchers and institutions

Objective 1: Capitalise on research insights from existing work to maximise VfM and support scaling up

Four research themes were identified under this objective: WASH and undernutrition; WASH and routine immunisation; WASH and pro-poor urban sanitation; and WASH and complementary food hygiene.

In response to the call put out by SHARE under these themes, the following proposals were accepted (see annual report 2015 for the process and decision-making), and have now been contracted:

- *The effect of a novel early childhood hygiene intervention on enteric infections and growth faltering in low-income informal settlements of Kisumu, Kenya* - a cluster randomised controlled trial - Great Lakes University of Kisumu (WASH and undernutrition)
- *Hand hygiene intervention to optimise helminth infections control: a cluster randomised controlled trial in NW Tanzania* - Mwanza Intervention Trials Unit (WASH and undernutrition)
- *Achieving universal access to adequate, sustainable and equitable sanitation and hygiene in the cities of tomorrow* - WaterAid (WASH and pro-poor urban sanitation)
- *Creating demand for sanitation* - Centre for Infectious Disease Research in Zambia (WASH and pro-poor urban sanitation)
- *WASH and hygiene of weaning foods* - Malawi Epidemiology and Intervention Research Unit and The University of Malawi - Polytechnic (WASH and complementary (weaning) food hygiene)

We also set aside £150,000 for the following proposal in the WASH and routine immunisation theme, and are seeking to leverage the extra £150,000 required to fund it:

- *Rotavirus vaccine seroconversion and potential interference from environmental enteric dysfunction: A comprehensive evaluation of diarrhoea among immunised child populations in Zambia* - Centre for Infectious Disease Research in Zambia.

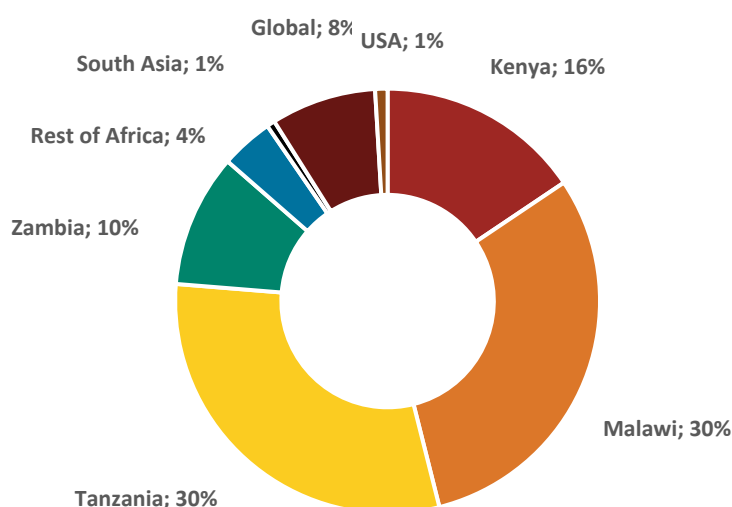
Objective 2: Scale up results through targeted work with national programmes

For this objective a budget was set aside to support research in the two core countries of Malawi and Tanzania with the addition of a small resource to provide responsive work elsewhere. The process has been informed by lessons learned from the country platforms in Phase I, resulting in national staff being employed by SHARE partners and embedded within established research institutions, to good effect. Additional capacity development supports their roles, and they are engaged with the national research themes. The coordinators liaise jointly with their institution and the Management Group thereby encouraging knowledge sharing and collaboration.

Objective 3: Strengthen the capacity for sustained global sanitation and hygiene research by southern researchers and institutions

This objective is developed through national core partners, national sector actors, national research capacity, and global sanitation and hygiene research fellows (SHARE Fellows). In addition SHARE is developing a partnership with the Centre for Infectious Disease Research in Zambia focused on building a sustainable relationship through leveraging co-funding. Figure 4 shows the amount of work contracted by countries as a percentage of total current expenditure. It also highlights the extent to which the partners have collaborated beyond the consortium to engage other institutions globally, primarily to bring in expertise as part of capacity development, to enhance national research and increase specialist skills.

Figure 4: Percentage of value of Phase II contracts issued to project countries and other regions



SHARE's activities in expanding the capacity of national core partners are seen through our research uptake activities, as well as the capacity development strategy. The involvement of DFID, the World Bank's Water and Sanitation Programme and UNICEF in national activities (also globally in the case of UNICEF) is a successful result of the programme's commitment to developing capacity in the sector.

One area identified in many of the partners' capacity programmes is the development of courses and workshops. The availability of these for others in the sector is implicit in achieving sustainability within the partner institutions and knowledge growth within the WASH sector.

Collaborative research was a prerequisite for successful application to the SHARE research theme call. Collaboration has been achieved across SHARE partners as well as externally to bring together the expertise needed to achieve the dual objectives of research and skills transfer (figure 4). Partners are also engaging junior researchers on their projects in various SHARE roles to enable them to put their research training into use. Some of these are funded through the SHARE Research Fellows programme where they are supported to engage in the research as well as undertake a programme of personal research capacity development. One Fellow has already been engaged in Malawi.

SHARE's management costs have remained within budget and are on track to stay within 10% of the Phase II programme value. Leveraged funding for the period is £50,689.

4.3 Value for money assessment

In the 2015 external review of SHARE, it was noted that '*the ability to measure and report on value for money will be hindered by limited resources devoted to monitoring and evaluation*'. In response, SHARE appointed a full-time M&E Officer in March 2016 to replace the previous part-time role and already it has had a beneficial impact. The investment has given us the ability to respond more quickly and effectively, and is resulting in improved, more accessible data. This will ensure that the consortium is able to perform better strategically through greater knowledge of itself and its effect in the sector.

Phase II of SHARE continues to represent value for money by realising its VfM objectives. This would not be possible without the commitment of the partners, which has been exemplary particularly during the past six months. The choice of partners was an area highlighted as a potential high risk at the end of Phase I, SHARE responded by moving to research intensive institutions in the core countries for Phase II, this has proved to be the right decision, and will provide the basis for sustainability and SHARE's legacy post 2018.

4.4 Financial management performance

As noted by PwC in the 2015 review, SHARE continues to maintain well-documented and clear financial management that follows good practice in terms of segregation of duties, controls and required authorisation. Accountability and governance is achieved through named budget holders and all processes are well documented. Decisions taken by the Management, Executive and Advisory Groups are recorded together with any financial implication; this provides a further check for the Finance Team.

The move from a function-based to a workstream-focused budget structure for Phase II assists cost-sharing among partners, across the sector and within institutions. This has been seen in the research budgets, for example through sharing costly resources such as equipment, and recruiting new co-funded staff to provide resources that would not otherwise have been available. The programme continues to provide a small amount of core funding to enable partners to participate in executive meetings, and this is the only equitable allocation. A funded Management Team ensures stability, while the workstreams encourage collaboration, competition and learning. The adapted structure was designed to provide better linkages between budget/spend and activities/outputs so that SHARE achieves its outcomes.

5 Risk

5.1 Overview of risk

SHARE’s risk management has been adapted as the programme has developed, and was further revised as part of the 2015 external review. It is maintained as part of the management record. Risks and issues are addressed at the weekly management meetings, and a programmatic risk assessment takes place twice a year in June and December. A matrix is used to help decision-making and mitigation, and has been revised to take into account the change in programme structure, see Figure 5.

Figure 5: Revised matrix to assist coding, mitigation and decision-making for projects in Phase II

		LIKELIHOOD		
		LOW	MEDIUM	HIGH
IMPACT	HIGH	High impact, low probability (5)	High impact, medium probability (7)	High impact, high probability (8)
	MEDIUM	Medium impact, low probability (3)	Medium impact, medium probability (4)	Medium impact, high probability (6)
	LOW	Low impact, low probability (0)	Low impact, medium probability (1)	Low impact, high probability (2)

SCORE	RISK		
0	N/A	ACTION: No action required by Principal Investigator or National Coordinator other than normal monitoring and reporting.	OPTIONS: Potential for modelling as a successful project
1, 3	Minor	ACTION: Principal Investigator or National Coordinator increases interaction with project team to support the effort required to bring the project back on track. Make note in quarterly report of awareness/value of the work	OPTIONS: Consider ways to increase engagement
2, 4, 5	Moderate	ACTION: Principal Investigator and National Coordinator to discuss outputs with MG and agree new workplan for project completion. Assess resourcing.	OPTIONS: Reallocation of project resources; MG provides further resources/ support
6, 7	High	ACTION: Principal Investigator and National Coordinator to discuss issues and significance of project with MG. MG decides on best course of action and informs DFID.	OPTIONS: Reallocate resources within budget; reduce outputs & budget; no cost extension
8	KILLER	ACTION: Management Group to decide on action. Problems may be exogenous. CEO informs DFID.	OPTIONS: MG reassigns project, or revised project to another Principal Investigator; cancel project.

Two risks remain on the register from Phase I: the completion of PhDs (CB06 & CB08), one was submitted in May and the other is on track to complete this year. CB06 has dropped from a moderate to minor risk, while CB08 remains at moderate until submission. All other Phase I-related issues have been closed. In Phase II a number of risks relate to one issue, namely the timely completion of contracts for research projects. The issue was resolved during May 2016 and the related risks have been reduced to minor. Mitigation, including goodwill with partners, maintained momentum and it is anticipated that projects will be back on track by April 2017. It has been noted that delays with contracts with LSHTM and also with some partners have recurred from time to time, and we will continue to keep a watch on this situation through two Contracts Trackers, one based in the LSHTM Research Operations Office, and the other maintained by SHARE management.

Projects and partners that were affected by delays during the year will continue to be monitored and reviewed after each of the quarterly reports. The next assessment will take place when the ethical approvals are due. DFID is kept informed of significant risks on an ongoing basis.

The potential risk for unexpected, as well as expected, events around resources was highlighted during the year with the loss and change of key personnel. The need for succession and emergencies planning was added to the risk and issues register. Changes addressed were maternity cover for the Policy Research Manager (planned), appointment of a full-time M&E Officer (planned), the loss of the capacity director (unplanned), health of key staff, and the negative effects of soft funding on personnel contracts at LSHTM (moderate and high respectively). All personnel risks have been mitigated, or are in the process of mitigation.

5.2 Outstanding actions

A routine assessment of the availability of research staff named on the research theme projects will be undertaken at the partners' meeting on 5 July 2016.

6 Commercial considerations

6.1 Delivery against timeframe

After an anticipated slow start to Phase II the planned acceleration did not take place in the latter half of 2015 (see Section D, VfM & financial performance). With research contracts now in place, partners have been able to plan the timing of their fieldwork and data collection activities with confidence. It is expected that the knock-on effects from the long lead in time will have been absorbed, and the work will be fully back on track by April 2017.

6.2 Partnership performance

SHARE is run on a day-to-day basis by the Management Group, which currently consists of the CEO, Research Director and Policy Research Manager, while others join as required. The partners each have a representative on the Executive Group, which makes strategic decisions; there are seven partners apart from LSHTM. The Consortium Advisory Group consists of sector specialists with national and global sector expertise who provide additional advice, guidance and feedback on SHARE's activities and governance. SHARE is supported by a core team based in London that provides research uptake, M&E and financial expertise, as well as National Coordinators in Malawi and Tanzania. There is a close partnership with DFID and its representatives. The first partner survey of Phase II took place during the year, and reported 63% satisfaction with engagement in planning processes, and 71% satisfaction with consultation on decisions, while attendance at meetings was 81%

6.3 Asset monitoring and control

Asset procurement is in line with LSHTM's policy, and wherever possible through the use of contracts negotiated by the London Universities Procurement Unit. All assets are recorded through LSHTM's asset register where appropriate, checks are made annually giving their location and usage.

SHARE has few assets and these are mostly IT and office equipment, with one vehicle in use in India. Assets will be disposed of in line with the DFID's policy at the end of the programme.

7 Conditionality

This Section is not applicable. SHARE is a multi-country programme and does not provide funding through government systems.

8 Monitoring and evaluation

8.1 Evidence and evaluation

2016 has been a year of refinement and improvement for SHARE's approach to monitoring, evaluation and learning. The SHARE team has used the feedback from the 2015 PwC review to improve and guide its approach to M&E during the current review period. Much of early 2016 was spent considering and incorporating PwC recommendations into the M&E strategy and logframe. A full-time M&E Officer was recruited in March 2016 whereas the role had been previously a 0.5 full-time equivalent post. This increased commitment of resource to M&E enabled a greater focus on SHARE's M&E approach and systems. Questions about longer-term impact, VfM and measuring indirect beneficiaries were also considered extensively during the reporting period. These have been addressed and discussed in SHARE's Impact Paper, a document that aims to clarify SHARE's definition and approach to impact and to develop an appropriate and feasible methodology for measuring impact in Phase II.

Particular care was taken in the reporting period to ensure that monitoring systems are able to disaggregate data by gender. This includes data relating to publications, training and events. It was not possible to systematise this across SHARE events in Phase I but this has been recognised as a priority for Phase II and appropriate tools have been developed to meet this need. The importance of gender-disaggregated data has been discussed with partners and the SHARE team will provide ongoing support and tools for this issue where needed.

Phase II of SHARE is in a stage of early implementation and this has provided an excellent opportunity to review, consolidate and improve SHARE's M&E systems. New evidence from Phase II will not be available until the programme is in a more advanced stage of implementation. Systems have therefore been improved to ensure that ongoing evidence emerging from Phase I is recorded. Success stories have been used in this report to illustrate the contribution of SHARE evidence to the wider evidence base.

SHARE's proposed approach for reviewing impact will build on this repository of information to create Stories of Change that will analyse and capture qualitative evidence while combining this with a quantitative element. This is captured in further detail in SHARE's Impact Paper, which has been shared with DFID separately. This is an internal paper that aims to define what is meant by 'impact' within the context of the SHARE consortium. Defining impact will enable SHARE to implement better monitoring, measurement and evaluation of its work. This paper discusses the concept of 'impact' and summarises some of the key challenges in measuring SHARE impact. The paper considers several potential methodologies and proposes an approach for measuring SHARE's impact that will be tested by the M&E Officer in the coming months.

It is important to note that M&E is often reflexive and dynamic with necessary flexibility built in to continually improve processes, systems and tools. The M&E strategy should therefore be viewed as a living document that will be reflected on and adjusted as needed through the duration of SHARE Phase II. This adaptive approach echoes recommendations from the PwC evaluation team around building flexibility and adaptability into the SHARE Phase II logframe. The full M&E strategy has been shared with DFID and updates can be provided on request to emily.balls@lshtm.ac.uk.

8.2 Monitoring progress

Key M&E activities and achievements during the review period include the following:

Strategic

- Finalising SHARE's M&E Strategy for Phase II
- Finalising the Phase II logframe with input from the Management Group, partners, core team and DFID
- Producing the Impact Paper, which sets out strategic approach to measuring SHARE's impact and indirect beneficiaries.

Information management

- Consolidating data from Phase I in new systems for data management
- Consolidating existing publication data with bibliometrics tools and collecting up-to-date citation information

Tools and systems

- Developing and testing a new system for partner quarterly reporting, which was trialled in May 2016. This received positive feedback from partners and some small suggestions for improvements will be incorporated in the next reporting request.
- Developing new tools to enable partners to capture feedback and data from knowledge sharing events including an event feedback form for participants and a tool for event organisers.
- Developing tools to review partner engagement with SHARE management processes such as planning and decision-making, primarily through an annual survey.
- Working with the RIU team to finalise outcome maps with all partners; these are expected to be finalised by July 2016.
- Beginning to test and trial new approaches to measuring SHARE's indirect beneficiaries as per the Impact Paper.

Networking and engagement

- Attending learning events, including an outcome mapping workshop (15 - 17 June 2016) and a course on VfM, to engage with peers and other M&E practitioners (28 June 2016)
- Increasing the presence of M&E on the SHARE website through blogs, news stories and event reports.

Partner engagement and capacity development

- Support has been provided to SHARE partners in terms of providing guidance and inductions on the new quarterly reporting tools and outcome mapping approach.
- The M&E Officer joined partner workshops and events in the region and intends to pioneer a biannual monitoring visit to all partners starting in September 2016.

8.3 Annual report process

The annual report process involved the Management Group, core team and all partners. Clarifications were sought from DFID before starting work in order to define expectations and content. It is expected that the new quarterly reporting process will reduce the need for partners to provide information specifically for annual reporting in future as they will be providing regular monitoring reports that SHARE can use to compile the annual report. This streamlined approach is anticipated to not only improve SHARE's annual review processes but also allow more time for in-depth analysis of data.

8.4 Research outputs in brief

Table 8: Published research outputs

Indicators and definitions	N	Notes
Published research outputs	34	Also captured in the Output 2 Section on translational outputs
Peer-reviewed publications	17	Also mentioned in Output 1 Section on peer-reviewed journal articles.
Peer-reviewed publications that comply with DFID's open access policy	12	
Peer-reviewed publications with a Southern researcher as the primary author	8	4 of these publications have a lead female Southern author
Peer-reviewed publications explicitly addressing gender issues or women/ girls	4	These include a focus on sanitation-related psycho-social stress, links between sanitation and adverse pregnancy outcomes and the role of latrine availability in women's health-seeking behaviour.
Datasets made openly and freely available to external researchers	0	

Table 9: Technologies

Indicators and definitions	N	Notes
New technologies/products released or, where required, achieving regulatory approval	0	Not relevant to SHARE
Technologies halted during development stages	0	Not relevant to SHARE

2. Annexes

Annex A: Logframe

PROJECT TITLE		Sanitation and Hygiene Applied Research for Equity (SHARE)			Assumptions
IMPACT	Impact Indicator 1	Targets	Baseline (2014 -2015)	Year 3	
Accelerated progress towards universal sanitation and hygiene coverage in sub-Saharan Africa and South Asia	The annual number of people gaining access to improved sanitation in all SHARE focus countries.	Planned	Total: 10.9 million India: 7.58 million Bangladesh: 2.6 million Malawi: 271, 601 Tanzania: 501, 990	Total: 75.8 million India: 64 million Bangladesh: 5.8 million Malawi: 1.2 million Tanzania: 4.8 million	Baseline for Impact Indicator 1 is the number of people gaining access to improved sanitation from 2014 - 2015 according to JMP data. The Year 3 target is based on WASHWatch's data on the total number of people in each country who would need to be reached annually in order to meet the SDGs relating to universal access by 2030. While these figures are ambitious, it is important for SHARE to align with global targets. The original goal for impact in SHARE 1 was to reduce the number of child deaths in the four focus countries by an annual amount, reaching 100,000 by 2015. In fact, under 5 deaths fell by about 459,000, roughly 4.5 times greater. This original goal has been taken as a starting point, and the "planned" mortality rate adjusted to give similar rate reduction for the three years of the extension. i.e. Phase I 100,000 in five years; Phase II, 60,000 in three years. We do not expect research in Phase II to have immediate impact on child mortality, but we expect work from Phase I to have a continuing and increasing influence. For that reason, we maintain the original four focus countries and do not include Zambia and Kenya. *Under-five mortality rate is the probability per 1,000 that a new-born baby will die before reaching age five, if subject to age-specific mortality rates of the specified year.
	Achieved	Achieved	Source: Annual number of people gaining access to improved sanitation in each SHARE focus country according to data from UNICEF/WHO Joint Monitoring Programme. Targets based on global targets captured at WASHWatch.org		
	Impact Indicator 2	Targets	Baseline (June 15)	Year 3	
	Child (<5) mortality rate in all SHARE countries (# deaths/year)*	Planned	Bangladesh: 37.6 India: 47.7 Malawi: 64 Tanzania: 48.7	Bangladesh: 36 India: 46.1 Malawi: 60.4 Tanzania: 46.7	
		Achieved			
		Source: Analysis of data from www.childinfo.org			

OUTCOME	Outcome Indicator	Targets	Baseline (June 15)	Year 1	Year 2	Year 3	Assumptions	
National & global sector partners change the way they plan, implement or monitor in order to increase i) equitable access, ii) sustainability, and iii) cost-effectiveness of sanitation and hygiene	Outcome Indicator 1 a) Amount of funds invested by other donors in SHARE research (£) b) invested in sanitation and hygiene projects influenced by SHARE (£)	Planned	a) £6.4 mil in SHARE research b) £80.8 mil in WASH investments	a) 0.25 million b) 0.5 million	a) 0.5 million (cumulative to Year 1) b) 2.5 million	a) 1.5 million (cumulative to Year 1 and 2) b) 7.5 million	a) Based on % of total investment calculated in targets for Phase I	
		Achieved		a) £50,689 b) £703,254				
		Source: Quarterly reporting						
Percentage of progress markers met by recipients of funding, as indicated in the Outcome Mapping Document developed for each partner (Number of progress markers may vary).	Outcome Indicator 2	Planned	Unknown	20%	40% (cumulative to Year 1)	70% (cumulative to Year 1 and 2)	That RIU activities form the basis of long term progress markers.	
		Achieved	N/A	15%			That externalities, e.g. changes to national government policies are not viewed to be attributable to the project's interventions.	
		Source: Partner reporting on Outcome Mapping activities, qualitative interviews with key boundary partners.						
Percentage of capacity development outcomes met by recipients of funding, as indicated in the capacity building strategy documents prepared by partners.	Outcome Indicator 3	Planned	Unknown	20%	40% (cumulative to Year 1)	70% (cumulative to Year 1 and 2)		
		Achieved	N/A	Information not available				
		Source: Capacity development plans have been agreed and monitoring and evaluation tools will be developed and take effect during the next year						
INPUTS (£)	DFID (£)		Govt (£)	Other (£)	Total (£)	DFID SHARE (%)		
	£5,890,000	0	0	0	0			

OUTPUT 1	Output Indicator 1.1	Targets				Assumptions		
		Baseline (June 15)	Year 1	Year 2	Year 3			
SHARE builds new evidence and synthesizes existing knowledge	1.1.1 Number of peer-reviewed publications on SHARE research	1.1.1 - 60 1.1.2 - 27% 1.1.3 - 35%	1.1.1 - 65 1.1.2 - 40% 1.1.3 - 40% (All cumulative to baseline)	1.1.1 - 70 1.1.2 - 50% 1.1.3 - 45% (All cumulative to baseline + Year 1)	1.1.1 - 80 1.1.2 - 60% 1.1.2 - 50% (All cumulative to baseline + Year 1 and 2)	<ul style="list-style-type: none"> Working on the basis that a target of further 20 publications over the three year extension period is reasonable. To be reviewed in light of the revised focus for Phase II to determine whether this volume of peer-reviewed publications is either necessary or desired. -Baseline for % of female authors and authors from institutions in LMICS calculated as mean of % from the last three Annual Reports (June 2013, 2014 and 2015) 		
	1.1.2 Number and percentage of authors are from institutions in Low and Middle Income Countries (LMICs)							
	1.1.3 Number and percentage of authors who are female authors		1.1.1 - 77 1.1.2 - 20% 1.1.3 - 43%					
		Source SHARE M&E systems and reporting from Principal Investigators and researchers.						
	Output Indicator 1.2	Targets	Baseline (June 15)	Year 1	Year 2	Year 3	Assumptions	
	1.2.1 Average number of downloads of each SHARE journal paper in a year, from the SHARE website.	Planned	Unknown	1.2.1 10 (Annual average)	1.2.1 13 (Annual average)	1.2.1 15 (Annual average)	Based on the assumption that this information will be consistently available from SHARE website in future.	
	1.2.2 Average number of views/downloads of each SHARE journal paper in a year from Research Online.	Achieved	N/A	1.2.2 No target as no baseline	1.2.2 TBC after year one	1.2.2 TBC after year one		
		Source: SHARE website data and Research Online data.						
IMPACT WEIGHTING : 25%								
INPUTS (£)		DFID (£)	Govt (£)	Other (£)	Total (£)	DFID SHARE (%)		
		£3,419,339	0	0	0			

OUTPUT 2		Output Indicator 2.1	Targets	Baseline (June 15)	Year 1	Year 2	Year 3	Assumptions
SHARE disseminates and communicates research to encourage uptake of policy and programming	Percentage of RIU activities completed by funding recipients in their outcome mapping document	Planned	Unknown	30%	50% (Cumulative to year 1)	80% (Cumulative to year 1 and 2)	<ul style="list-style-type: none"> That outcome maps are agreed and fully understood by research partners with appropriate time horizons That the relevant research is actionable and RIU activities are appropriate. That relevant stakeholders are identified and prioritised in the outcome map. 	
		Achieved	N/A	62%				
		Source: Partner reporting on Outcome Mapping activities, qualitative interviews with key boundary partners.						
	Output Indicator 2.2	Targets	Baseline (June 15)	Year 1	Year 2	Year 3	Assumptions	
	2.2.1 Number of attendees at SHARE knowledge sharing events (including disaggregated at a gender level)	Planned	2.2.1 848 (of which female 268; 52% ³) 2.2.2 Unknown 2.2.3 Unknown	2.2.1 300 2.2.2 30% 2.2.3 No target	2.2.1 400 (Cumulative to Year 1) 2.2.2 60% 2.2.3 No target	2.2.1 500 (Cumulative to Year 1 and 2) 2.2.2 80% 2.2.3 No target	<ul style="list-style-type: none"> That a sufficient number of events will be convened. That attendance to those events can be feasibly tracked. That relevant, practical and insightful event monitoring processes can be put in place. That enhancing knowledge is core to the purpose of the events. That information can be analysed and aggregated. That we can get information about external events consistently. No target is set for 2.2.3 as this is not something that SHARE is trying to influence but is a positive externality of the project that SHARE will aim to monitor and measure. 	
	2.2.2 Number and percentage of those attendees of those events that report they found them to be useful in improving their knowledge	Achieved		2.2.1 657 2.2.2 98% 2.2.3 1				
	2.2.3 Number of external events using SHARE resources	Source: List of attendees of SHARE events; event feedback forms/ interviews with attendees Information from SHARE partners about external events, word of mouth.						

Output Indicator	Targets	Baseline (June 15)	Year 1	Year 2	Year 3	Assumptions
Output Indicator 2.3 Number of recipients of SHARE technical assistance;	Planned 29	29	10	20 (Cumulative to Year 1)	30 (Cumulative to Year 1 and 2)	<ul style="list-style-type: none"> That the requirements are fully understood and assessed before being reported against. That relevant, practical and insightful monitoring processes can be put in place. The information can be analysed and aggregated. This will be supported by a qualitative analysis of the applications of the assistance and any feedback given by recipients will be captured.
	Achieved 7					
	Source Log of requests for technical advice in SHARE M&E systems, qualitative analysis of recipient feedback/application of technical advice					
Output Indicator 2.4 2.4.1 Number of translational outputs arising from SHARE research, as indicated in the list of content type on the resource pages of SHARE website. (Translational outputs include: policy briefs, reports, toolkits, posters, presentations, podcasts etc.) 2.4.2 Average monthly number of views of SHARE website 2.4.3 Number of translational outputs downloaded from the SHARE website.	Planned	2.4.1: 80 reports and manuals, 83 media outputs 2.4.2: 2,666 2.4.3: Unknown	2.4.1 10 2.4.2: 3,000 (annual target) 2.4.3: 690	2.4.1: 15 (cumulative to year 1) 2.4.2: 3,300 (annual target) 2.4.3: 3,036	2.4.1: 20 (cumulative to Year 1 and 2) 2.4.2: 3,630 (annual target) 2.4.3: 3,340	That SHARE can effectively track and monitor downloads and page views. Target 2.4.2 and 2.4.3 based on 10% increase. Target 2.4.3: based on one month monitoring of downloads of translational outputs: 230 downloads. Target 2.4.3 to be revised when an average monthly download is tracked for 6 months. Year 1 target 2.4.3: based on data collected only from March-June 2016, as system was not set up to monitor them previously. <ul style="list-style-type: none"> 2.4.1 Assuming a basis of 80 manuals and reports from inception as baseline. Assuming a basis of 83 media outputs from inception as baseline.

Achieved		2.4.1 34 translational, 23 media (57)		2.4.2: 3119		2.4.3: Data not available					
Source		SHARE RIU officer reports from website data.									
Output Indicator 2.5	Targets	Baseline (June 15)	Year 1	Year 2	Year 3	Assumptions					
Citations by other authors of Phase I and II publications (expressed in average number per article)	Planned	11	11	11	11	This is based on total number of citations in June 2015 (669) divided by total number of articles (59).					
	Achieved										
		Source: SHARE M&E Officer collects data from Web of Science.									
IMPACT WEIGHTING: 25%											
INPUTS (£)	DFID (£)	Govt (£)	Other (£)	Total (£)	DFID SHARE (%)						
	£870,752	0	0	0							

OUTPUT 3		Output Indicator 3.1	Targets	Baseline (June 15)	Year 1	Year 2	Year 3	Assumptions
SHARE develops the capacity of key stakeholders in the WASH sector and other related sectors.	3.1.1 Number of attendees at SHARE training sessions (disaggregated at gender level).	Planned	3.1.1 - 491 (SHARE 1) 3.1.2 - Unknown	3.1.1 - 50 3.1.2 - 15%	3.1.1 - 100 (cumulative to Year 1) 3.1.2 - 40%	3.1.1 - 150 (cumulative to Year 1 and 2) 3.1.2 - 70%	<ul style="list-style-type: none"> That SHARE can effectively track and monitor individuals/organisations access to training materials- including their type of work. This figure will be based on the assumption that there will be a high number of non-replies, courtesy replies, and that we will not always have contact details for all attendees. That the nature of work is relevant and appropriate to overall policy and programming. That relevant, practical and insightful event monitoring processes can be put in place. 	
		Achieved	3.1.1 - 43 3.1.2 - Data not available					
	3.1.2 Number and percentage of those attendees that report using at least one aspect of the training in their day-to-day work at least one month after completing the training	Source: Event register and qualitative survey/interviews with training attendees						
	Output Indicator 3.2	Targets	Baseline (June 15)	Year 1	Year 2	Year 3		
Number and percentage of research partners reporting that their experience working with SHARE has developed their research capacity.	Planned	Unknown	45%	75%	90%			
	Achieved	n/a	Data not available					
Source: Interviews/surveys with Principal investigators and researchers								
Output Indicator 3.3		Targets	Baseline (June 15)	Milestone 1	Milestone 2	Target (date)		
Number and percentage of SHARE-supported postgraduate students who gain employment in a the WASH-relevant role sector post-graduation	Planned	Unknown	20%	40%	70%			
	Achieved	n/a	67% (4/6)					
Source: TBD - follow up with alumni perhaps through survey								
IMPACT WEIGHTING: 25%								
INPUTS (£)		DFID (£)	Govt (£)	Other (£)	Total (£)	DFID SHARE (%)		
		£999,972	0	0	0	0		

OUTPUT 4		Output Indicator 4.1	Targets	Baseline (June 15)	Year 1	Year 2	Year 3	Assumptions
The SHARE consortium is efficiently and effectively managed.	Percentage satisfaction of SHARE executive group member engagement in planning and decision making.	Planned	Unknown	50% (annual target)	70% (annual target)	100% (annual target)	<ul style="list-style-type: none"> That SHARE can effectively track and monitor consortium partners. That a relevant feedback instrument can be designed, analysed and reported against. That partners are agreed to be relevant to the planning and decision making process identified. 	
		Achieved	N/A	67%				
		Source: Annual Survey to representatives of partner organisations and SHARE national coordinators and qualitative discussions.						
	Output Indicator 4.3		Baseline (June 15)	Year 1	Year 2	Year 3	Assumptions	
	Number and percentage of research coordinators attending SHARE executive group meetings	Planned	89%	90% (annual target)	90% (annual target)	90% (annual target)	<ul style="list-style-type: none"> That sufficient information and notice is provided in advance to attendees. That full/high participation is deemed relevant That audio/video conferencing is considered to achieve high rate. 	
		Achieved		81%				
		Source: Minutes of meetings						
	Output Indicator 4.3		Baseline (June 15)	Year 1	Year 2	Year 3	Assumptions	
	4.3.1 Number of formal recommendations from CAG meetings addressed by MG and Country Partners. 4.3.2 Number and percentage of formal responses from Management Group and Country partners to CAG recommendations from each CAG meeting.	Planned	4.3.1 Unknown 4.3.2 Unknown	4.3.1 - 100% 4.3.2 - 1	4.3.1 - 100% 4.3.2 - 1	4.3.1 - 100% 4.3.2 - 1	<ul style="list-style-type: none"> That SHARE can effectively track and monitor projects. That a relevant feedback instrument can be designed, analysed and reported against. 	

					4.3.1 76%			
					4.3.2 6			
					Source: Dissemination of CAG minutes, recommendations, decision log, email correspondence.			
	Output Indicator 4.4		Baseline (June 15)	Year 1	Year 2	Year 3		
	Number and percentage of SHARE research projects tracking to agreed budget and timelines	Planned	Unknown	50% (annual target)	75% (annual target)	100% (annual target)		
		Achieved	N/A	100% (5) to budget 40% (2) to timelines				
		Source: Project reports from partners.						
IMPACT WEIGHTING: 25%								
INPUTS (£)	DFID (£)		Govt (£)	Other (£)	Total (£)	DFID SHARE (%)		
	£599,937		0	0	0			

Annex B: Financial documents

The audited financial statements for LSHTM are available [online](#).

An up to date budget and financial report is available below.

Table 10: Expenditure for reporting period against overall consortium budget

Budget for Period: 20 Jan 2015 - 19 Jan 2018 (Amendment #2 Mar 2016)			Expenditure: 01 Apr 2015 - 31 Mar 2016		
Phase II	Proposal Budget	% of total budget	Phase II	Expenditure to 31 Mar 15	% expenditure against budget
Research Projects	2,000,000	34%	Research Projects	11,449	1%
National Research Programme (NRP)	1,509,848	26%	NRP: Personnel	40,192	12%
			NRP: Projects	136,607	
Capacity Development (CD)	954,652	16%	CD: Personnel	76,967	9%
			CD: Projects	9,755	
Research into Use (RIU)	825,500	14%	RIU: Personnel	202,201	35%
			RIU: Projects	86,567	
Management (MN)	600,000	10%	MN: Personnel	143,631	25%
			MN: Expenses	8,061	
Totals	5,890,000	100%	Totals	715,430	12%

External Review	110,000
-----------------	---------

Phase II Contract Invoice Split	
Personnel	1,684,844
Projects & Expenses	4,205,156
Contract Value	5,890,000

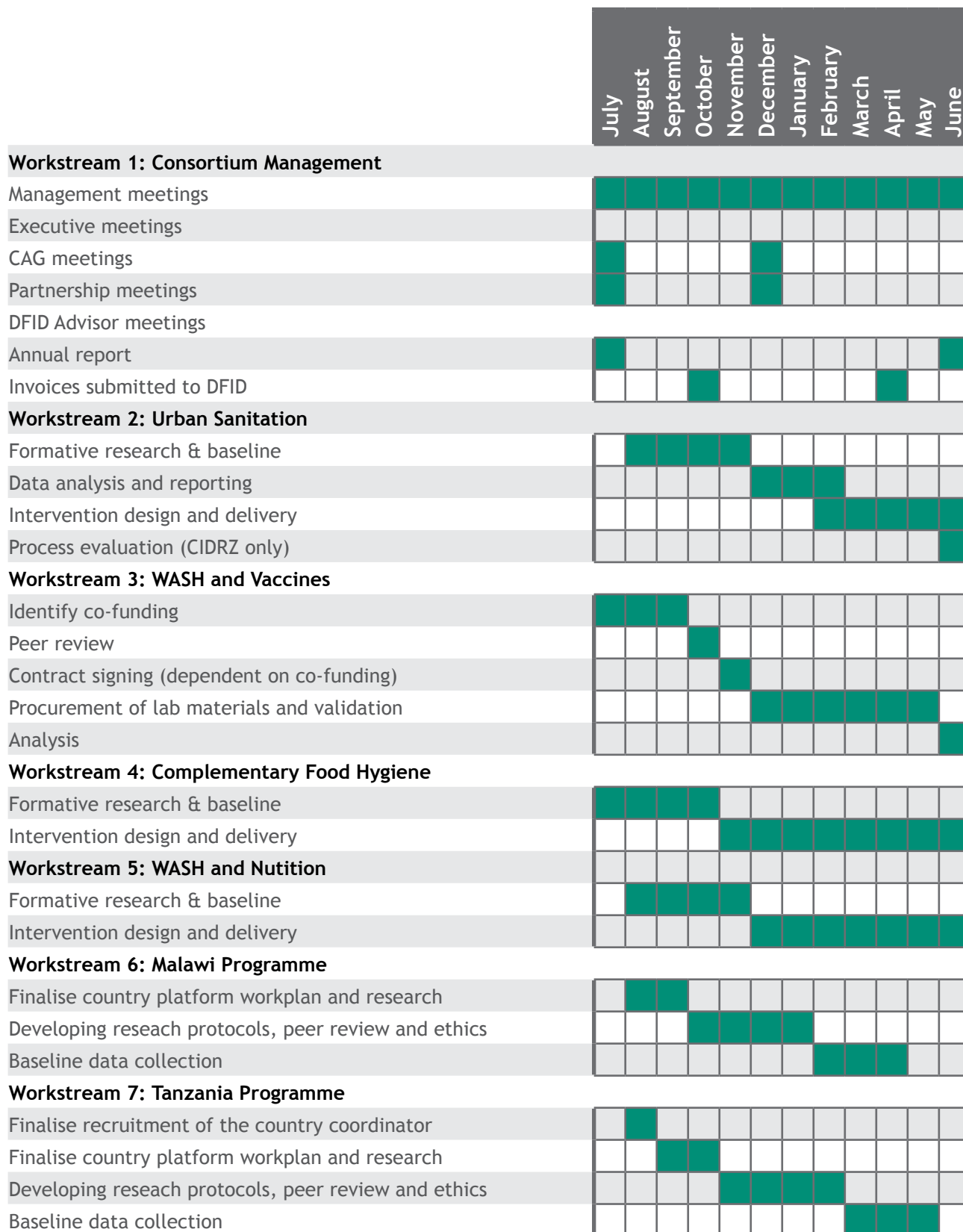
Expenditure: 01 Apr 15 - 31 Mar 16	
Personnel	462,991
Projects & Expenses	252,439
Total expenditure	715,430

Total Budget Phases I & II	
Personnel	3,745,827
Project & Expenses	12,144,183
Contract Value	15,890,010

Cumulative Expenditure: 20 Jan 10 - 31 Mar 16	
Personnel	3,203,449
Projects & Expenses	8,345,765
Total cumulative expenditure	11,549,214

Annex C: Forward work plan

Figure 6: Forward work plan



Workstream 8: Capacity Development

Recruitment of Capacity Development Consultant	■	■																	
Sign off capacity development plans and funding		■	■	■															
Unicef Evidence based WASH practice course				■															
Delivery of partner capacity building plans				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Workstream 9: Research Into Use

Dissemination at conferences	■	■	■	■															
Policy brief development and dissemination		■	■	■				■	■	■									
Website updates, twitter, newsletter	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Workstream 10: Monitoring and Evaluation

Quarterly reporting	■			■			■				■			■					
Outcome mapping workshops with partners							■	■						■	■				
Deveop Stories of Change		■	■	■	■														
Capacity Development and National Platform M&E							■	■	■										
Annual report development														■	■	■	■	■	■

Annex D: Asset register

Table 11: Asset register

Item No	Serial No.**	Date of Purchase dd/mm/yy	Description (Make and Model)	Purchase Value (£)	Location	Responsible person	Years of life	Disposal date dd/mm/yy	Reason for disposal (if applicable)
40106476		30/03/10	Samsung computer	582.00	N/A	N/A	3 yrs		Broken
40106503		24/03/10	Asus computer	793.52	N/A	N/A	3 yrs		Broken
40106991		01/04/10	PC Duo - 4?	1,434.00	LSHTM	Administration	5 yrs	Due	
70010057		05/05/10	HP Printer CC470A	469.00	LSHTM	E.Chappell	5 yrs	Due	
40107201		14/05/10	Conference phone	478.81	LSHTM	E.Chappell	5 yrs	Due	
40123374	DZZ393CB800028D	12/10/11	3 PhDs computers	531.00	UK	R Chunga	3 yrs	Due	
				531.00	N/A	T Huda	3 yrs	06/08/13	Stolen
				531.00	UK	O Gautam	3 yrs	Due	
40123382		24/10/11	2 PhDs computers	516.00	S.Africa	S.Simiyu	3 yrs	Due	
				516.00	UK	P Antwi-Agwei	3 yrs	Due	
40131712	HPE191KC501914	18/10/12	Samsung Netbook	244.00	France	O Cumming	3 yrs	Due	
40144214		19/12/13	Lenovo computer	501.00	LSHTM	E.Roma	3 yrs		
40158359		14/02/15	Dell Computer	474.24	LSHTM	E Chappell	5 yrs		
41201668		08/09/10	Second hand vehicle	11,534.85	India	T.Clasen	5 yrs	Due	
41250967		01/09/13	HP Printer	1,240.51	LSHTM	E Chappell	5 yrs		
47012693		01/08/15	Video camera	208.86	LSHTM	A.Chitty	5 yrs		

** Asset register is held by the ITS Department at LSHTM. Item No. refers to the Agresso account transaction number which is linked to the PO.

Annex E: List of outputs

Table 12: List of outputs published in the reporting period

	Publication Title	Journal Title	Lead Author	SHARE URL	Year of Publication	Country/ regional focus
1	Risk of adverse pregnancy outcomes among women practicing poor sanitation in Rural India: A population-based prospective cohort study	PLOS Medicine	Padhi	http://www.sharersearch.org/research/risk-adverse-pregnancy-outcomes-among-women-practicing-poor-sanitation-rural-india	2015	India
2	Availability and satisfactoriness of latrines and hand washing stations in health facilities, and role in health seeking behavior of women: Evidence from Rural Pune District, India	Journal of Water, Sanitation and Hygiene for Development	Steinmann	http://www.sharersearch.org/research/availability-and-satisfactoriness-latrines-and-hand-washing-stations-health-facilities-and	2015	India
3	Sanitation-related psychosocial stress: A grounded theory study of women across the life-course in Odisha, India	Social Science and Medicine	Sahoo	http://www.sharersearch.org/research/sanitation-related-psychosocial-stress-grounded-theory-study-women-across-life-course	2015	India
4	The impact of water, sanitation and hygiene interventions to control Cholera: A systematic review	PLOS ONE	Taylor	http://www.sharersearch.org/research/impact-water-sanitation-and-hygiene-interventions-control-cholera-systematic-review	2015	Global
5	Socio-economic dynamics in slums and implications for sanitation sustainability in Kisumu, Kenya	Development in Practice	Simiyu	http://www.sharersearch.org/research/socio-economic-dynamics-slums-and-implications-sanitation-sustainability-kisumu-kenya	2015	Kenya

6	Evidence on the effectiveness of WASH interventions on health outcomes in humanitarian crises: A systematic review	PLOS One	Ramesh	http://www.sharereseach.org/research/evidence-effectiveness-wash-interventions-health-outcomes-humanitarian-crises-systematic	2015	Global
7	Associations between school & household level water, sanitation and hygiene conditions & soil-transmitted helminth infection among Kenyan school children	Parasites and Vectors	Freeman	http://www.sharereseach.org/research/associations-between-school-household-level-water-sanitation-and-hygiene-conditions-soil	2015	Kenya
8	Socio-cultural and behavioural factors constraining latrine adoption in rural coastal Odisha: An exploratory qualitative study	BMC Public Health	Routray	http://www.sharereseach.org/research/socio-cultural-and-behavioural-factors-constraining-latrine-adoption-rural-coastal-odisha	2015	India
9	A farm to fork risk assessment for the use of wastewater in agriculture in Accra, Ghana	PLOS ONE	Antwi-Agyei	http://www.sharereseach.org/research/farm-fork-risk-assessment-use-wastewater-agriculture-accra-ghana	2015	Ghana
10	Neighbour-shared versus communal latrines in urban slums: a cross-Sectional study in Orissa, India exploring household demographics, accessibility, privacy, use and cleanliness	Transactions of the Royal Society of Tropical Medicine and Hygiene	Heijnen	http://www.sharereseach.org/research/neighbour-shared-versus-communal-latrines-urban-slums-cross-Sectional-study-orissa-india	2015	India
11	Sanitation, stress and life stage: a systematic data collection study among women in Odisha, India	PLOS One	Hulland	http://www.sharereseach.org/research/sanitation-stress-and-life-stage-systematic-data-collection-study-among-women-odisha-india	2015	India

12	Development of a multi-dimensional scale to assess attitudinal determinants of sanitation uptake and use	Environmental Science and Technology	Dreibelbis	http://www.sharersearch.org/research/development-multi-dimensional-scale-assess-attitudinal-determinants-sanitation-uptake-and	2015	Global
13	Determinants of usage of communal sanitation facilities in informal settlements of Kisumu, Kenya	Environment and Urbanisation	Simiyu	http://www.sharersearch.org/research/determinants-usage-communal-sanitation-facilities-informal-settlements-kisumu-kenya	2015	Kenya
14	Integration of water, sanitation and hygiene for the control of neglected tropical diseases: a review of progress and the way forward	International Health	Waite	http://www.sharersearch.org/research/integration-water-sanitation-and-hygiene-control-neglected-tropical-diseases-review	2015	Global
15	Ascaris lumbricoides infection following school-based deworming in western Kenya: Assessing the role of pupils' school and home water, sanitation, and hygiene exposures	The American Journal of Tropical Medicine and Hygiene	Garn	http://www.sharersearch.org/research/ascaris-lumbricoides-infection-following-school-based-deworming-western-kenya-assessing	2016	Kenya
16	Can water, sanitation and hygiene help eliminate stunting? Current evidence and policy implications	Maternal and Child Nutrition	Cumming	http://www.sharersearch.org/research/can-water-sanitation-and-hygiene-help-eliminate-stunting-current-evidence-and-policy	2016	Global
17	Risk Perceptions of Wastewater Use for Urban Agriculture in Accra, Ghana	Plos One	Antwi-Agyei	http://www.sharersearch.org/research/risk-perceptions-wastewater-use-urban-agriculture-accra-ghana	2016	Ghana

Annex F: Phase II Impact-level data

This annex aims to clarify the methodology and source behind figures used in the SHARE Logframe and the SHARE synthesis report.

Impact Indicator 1: The annual number of people gaining access to improved sanitation in all SHARE focus countries

This represents the annual number of people gaining access to improved sanitation in each SHARE focus country according to data from [UNICEF/WHO Joint Monitoring Programme \(JMP\)](#). This information has been collected for each country and also as a total annual number for all four countries.

Targets for this indicator are based on global targets captured at [WASHWatch](#) in order to align with the SDGs. While these are aspirational, it is important for SHARE to align with the SDGs and to reflect global targets. These targets represent the number of people who would need to have gained access between Year 1 (2016) and Year 3 (2018) in order for each country to be on track to meet the SDGs.

Table 13: Baseline and targets for Impact Indicator 1

Baseline (2014 - 2015)	Year 1	Year 2	Year 3
Total: 10.9 million			Total: 75.8 million
India: 7.58 million			India: 64 million
Bangladesh: 2.6 million			Bangladesh: 5.8 million
Malawi: 271, 601			Malawi: 1.2 million
Tanzania: 501, 990			Tanzania: 4.8 million

This table refers to 2016 as Year 1, 2017 as Year 2 and 2018 as Year 3.

Impact Indicator 2: Child (<5) mortality rate in all SHARE countries (# deaths/year)

The under-five mortality rate is the probability per 1,000 that a newborn baby will die before reaching age five. It is represented as a rate (37.6) but this can be used to calculate actual number of child deaths avoided. This data comes from <http://data.unicef.org>.

Table 14: Baseline and targets for Impact Indicator 2

Baseline (2015)	Year 1	Year 2	Year 3
Bangladesh: 37.6 India: 47.7 Malawi: 64 Tanzania: 48.7			Bangladesh: 36 India: 46.1 Malawi: 60.4 Tanzania: 46.7

This table refers to 2016 as Year 1, 2017 as Year 2 and 2018 as Year 3.

Data in the SHARE Synthesis Report

The figure of **17 million** represents the total average annual number of people reached with improved sanitation in all four SHARE countries between 2010 and 2015 (Source: JMP). This figure was based on JMP data available at the time, although updated JMP data suggests the annual average is closer to 19 million³.

The total actual number of people gaining access to improved sanitation in SHARE’s four focus countries between 2010 and 2015 was **95.9 million** (Source: JMP).

The figure of **459,000** represents the total number of child deaths averted in the four focus countries between 2010 and 2015 (Source: UNICEF).

Figure 7: Statistics used in the synthesis report



17 million
People with
improved sanitation



459,000
Fewer child deaths

³ It is important to note that **JMP data** is often subject to change and may alter statistics relating to previous years as new information becomes available. While JMP data is subject to change, SHARE will not alter the baselines in the logframe in response to corrections on past data. SHARE may consider new data or changed information when it comes to final reporting in order to ensure that we represent change accurately.

Annex G: Success stories

SHARE has produced 12 success stories since the programme's inception. Here we present updates on five project areas that have seen significant developments during this reporting period.

1. WASH, violence and sanitation-related psychosocial stress

Lack of access to safe sanitation facilities infringes on women's dignity and puts them at risk of violence. When forced to defecate in the open or use an unsafe facility women lack privacy and face feelings of shame, and become vulnerable to violence and sexual assault. Beyond the physical impacts, violence can have long-term psychological impacts associated with harassment, bullying, discrimination or marginalisation, and psychosocial impacts associated with the fear of these threats.

During its first phase, SHARE made a significant contribution to advancing the knowledge base on this important topic. In 2011, studies shed light on the experiences of women from slums in **India** and **Uganda**. Women reported intense feelings of shame and stigma associated with going to the toilet, and expressed fear of rape and violence when using sanitation facilities or defecating in the open.

SHARE and WSSCC **co-funded research in India** to explore the negative impact of WASH on the psychosocial stress levels of women and girls. **One study found** that during the course of sanitation-related activities women encountered environmental, social and sexual stressors, the intensity of which were modified by the woman's life stage, living environment and access to sanitation facilities. The study also developed an innovative tool to quantify sanitation-related psychosocial stress.

In response to this problem, in 2013 SHARE and 28 development and humanitarian organisations co-published the '**Violence, Gender and WASH Practitioner's Toolkit**', which presents best practice for responding to and protecting people against WASH-related violence throughout all aspects of policy and programming.

Research dissemination efforts have seen these findings and guidelines widely taken up. For example, the toolkit has been referenced as a useful tool in the UN Secretary-General's 2015 'Girl Child' report and on the Global WASH Cluster 'WASH Minimum Commitments for the Safety and Dignity of Affected People' website, and fed into and is referenced in the Inter-Agency Standing Committee's 2015 Guidelines for Integrating Gender-based Violence Interventions in Humanitarian Action. It is also being used widely by international agencies and practitioner organisations - such as DFID, Save the Children, UNICEF and WaterAid - and in trainings in 10 countries. Further examples of the toolkit's uptake are illustrated in Table 15.

During its second phase, to further expand the evidence base on this important issue, SHARE is funding a **study in southern Tanzania** that will explore women and girls' sanitation vulnerabilities. Applying the

evolving understanding of gendered impacts of inadequate water and sanitation services, and using mixed methods, the study will: 1) examine the gender-specific water and sanitation needs of women and girls through specific life stages; 2) explore the impact of inadequate and/or constrained access to water and sanitation on psychosocial stress, violence, education, and drudgery; and 3) adapt and apply measures of sanitation-related distress and water insecurity among a sample of women and assess relationships with international standard measures of psychosocial distress and quality of life.

These findings will help to better understand the gendered WASH needs of women and girls, which can ultimately improve sanitation planning and implementation, and contribute to progress towards attaining SDG 6.2 that seeks to eliminate open defecation by 2030 in a way that *“pay[s] special attention to the needs of women and girls and those in vulnerable situations”*.

Read more

For detailed references and more related resources and publications, please visit: <http://bit.ly/ps-stress> and <http://bit.ly/WASH-viol>

Table 15: Uptake of Violence, Gender and WASH Toolkit

VIOLENCE, GENDER AND WASH TOOLKIT	
CAPACITY DEVELOPMENT	<ul style="list-style-type: none"> In trainings in the Democratic Republic of Congo, India, Lebanon, Sierra Leone, Somalia, South Sudan, Switzerland, the UK and Vietnam, led by organisations such as: Inter-Agency Standing Committee/UNICEF, Norwegian Church Aid/ Inter-Agency Standby Capacity Support Unit at UN Office for the Coordination of Humanitarian Affairs, International Medical Corps, Medair, WaterAid and the Water, Engineering and Development Centre (WEDC) In lectures at universities including: the University of Nottingham, UK and WEDC, Loughborough University, UK In a webinar run by the Rural Water and Sanitation Network In a number of international NGO and UN-supported international workshops for internal capacity building
POLICY/ADVOCACY	<ul style="list-style-type: none"> Lynne Featherstone, then UK Parliamentary Under Secretary of State - highlighted its value during the debate on the IDC report on the UK Government Inquiry related to Violence Against Women and Girls (Jan 2014) and at the Preventing Sexual Violence in Conflict Global Summit in London (June 2014) where she stated: “We have also been working with WaterAid, through the SHARE Research Consortium, to produce a toolkit for water, sanitation and hygiene practitioners to reduce the risks to women and girls of harassment and vulnerability to sexual attack when collecting water, using public toilets or when they are forced to defecate in the open (often in the dark) because there is no household latrine. UN Secretary-General’s ‘Girl Child’ report - references it as a useful tool (2015)

<p>PRACTICE</p>	<ul style="list-style-type: none"> • Medair has sought to apply the principles in its programmes and is integrating the issues into its internal guideline documents. • WASH Cluster - toolkit authors contributed to the development of WASH Minimum Commitments for the Safety and Dignity of Affected People • Influenced programme responses in South Sudan, India and Liberia <ul style="list-style-type: none"> • e.g. UNICEF's draft 2016 Annual Report notes that the toolkit is being rolled out in humanitarian situations and that in South Sudan, the Child Protection and WASH Sections, along with the WASH Cluster, have mainstreamed gender-based violence concerns into minimum latrine standards. • Referred to/referenced in: <ul style="list-style-type: none"> • House, S et al (2014) Violence, gender and WASH: a practitioner's toolkit. Making water, sanitation and hygiene safer through improved programming, Humanitarian Exchange Magazine, Issue 60. Inter-Agency Standing Committee (2015) Guidelines for Integrating Gender-Based Violence Interventions in Humanitarian Action: Reducing risk, promoting resilience and aiding recovery. • International Rescue Committee & Global Women's Institute (2015) Responding to Typhoon Haiyan: Women and Girls Left Behind. A study on violence against women and girls prevention and mitigation in the response to Typhoon Haiyan UK & USA. • UNHCR (2015) Manual, Tools and Guidelines for Refugee Settings [DRAFT OF UPDATED VERSION] • WaterAid & WEDC 'Accessibility and safety audits'
<p>RESEARCH</p>	<ul style="list-style-type: none"> • Referred to/referenced in multiple papers: <ul style="list-style-type: none"> • House, S & Cavill, S (2015) Making Sanitation and Hygiene Safer: Reducing Vulnerabilities to Violence, Frontiers of CLTS: Innovations and Insights, Issue 5. • Sommer, M et al (2015) Violence, gender and WASH: spurring action on a complex, under-documented and sensitive topic, Environment and Urbanization, 27(1): 1-12

2. WASH and reproductive, maternal and newborn health

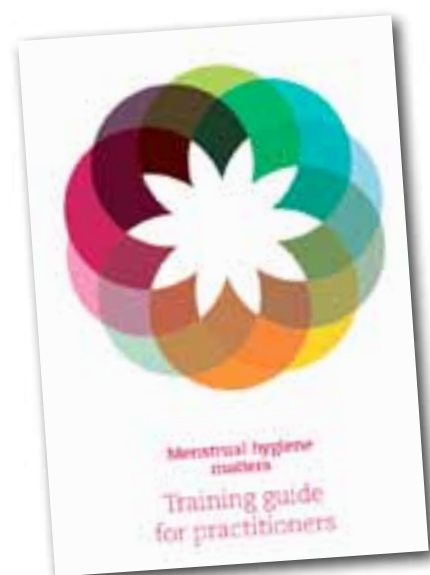
Improving reproductive, maternal and newborn health in low-income settings requires a greater understanding of WASH conditions in health facilities and the impact of poor WASH on menstrual hygiene management (MHM).

During its first phase, SHARE advanced the knowledge base, through a **systematic review** exploring the health and social effects of MHM, and studies in Bangladesh and **Malawi** investigating MHM practices of and challenges faced by girls in schools. The review found a plausible health effect from poor MHM, and informed an **innovative case-control study in India** examining the impact of MHM practice on urogenital infections. This study concluded that interventions that ensure women have access to private facilities with water, and educate women about safer, low-cost MHM materials could reduce urogenital disease among women. This relationship had never before been explored using both symptoms and laboratory-diagnosed health outcomes.

In 2012, SHARE and WaterAid funded a first-of-a-kind manual, '**Menstrual Hygiene Matters**', co-published by 18 organisations, which brings together practical experiences on MHM from across the WASH, health, education and gender sectors, and from development and humanitarian settings.

SHARE has also explored the **links between WASH and maternal health** and evaluated existing evidence on the impact on maternal mortality through a **systematic review** and **conceptual framework**. Poor household sanitation was found to increase the possibility of women dying from maternal causes three-fold. Further analysis showed **strikingly low levels of WASH coverage in birth settings in Tanzania**. Finally, co-funded studies developed tools to perform a 'situation analysis' and 'needs assessment' of maternity units' WASH and infection prevention and control in Tanzania, India (**WASH & CLEAN**), and through leveraged funding from Soapbox Collaborative Bangladesh. SHARE also funded another first-of-its-kind study that demonstrated an association between **sanitation and adverse pregnancy outcomes**.

Findings from the work have been shared widely and have influenced policy, practice and research. Examples include: informing a trial on menstrual hygiene and safe male circumcision promotion in Ugandan schools; a training guide for practitioners being developed from the Menstrual Hygiene Matters manual; the WASH & CLEAN Toolkit being taken up at state level in Gujarat (India) and shaping Ministry of Health action plans in Zanzibar; feeding into the 2015 WHO and UNICEF 'WASH in Health Care Facilities' report and accompanying global action plan; shaping SHARE's submission to the Zero Draft UN Global Strategy for Maternal, Newborn, Adolescent and Child Health; being referenced in the Government of India's MHM guidelines; and informing WHO's 'WASH FIT' (a tool for improving WASH in HCFs). Further examples of uptake of the Menstrual Hygiene Matters toolkit are illustrated in Table 16.



During its second phase, to further ensure the uptake of SHARE research and strengthen evidence-based decision-making in this field globally, SHARE is supporting the implementation of the WASH in Health Care Facilities Global Action Plan. SHARE sits on and provides technical advice to several related task teams (facility-led improvements, and global monitoring); convened a four-day international workshop on the global strategy, burden of disease and evidence and action priorities with WHO and UNICEF in March 2016; and co-led a training session on WASH in HCFs and participated in another side session on MHM in schools at the Brisbane WASH Futures conference in May 2016.

SHARE is also contributing funding to the Public Health Foundation of India’s modification of the WASH & CLEAN Toolkit that will render it more suitable for use in outpatient departments. The adaptation was a direct request of the Gujarat state government and signifies great uptake of this SHARE-funded tool.

Read more

For detailed references and more related resources and publications, please visit: <http://bit.ly/WASH-MNH> and <http://bit.ly/WASH-MHM>

Table 16: Uptake of Menstrual Hygiene Matters Resource

MENSTRUAL HYGIENE MATTERS RESOURCE	
CAPACITY DEVELOPMENT	<ul style="list-style-type: none"> Used to develop the Menstrual Hygiene Matters Training Guide for Practitioners (2015) Resource and training guide used by the following organisations when developing/delivering capacity development sessions: <ul style="list-style-type: none"> Eau Laos Solidarités - in training sessions for school girls ICRC - for an internal international learning event held in Morocco (2013). The ICRC subsequently established a cross-sectoral working group on MHM that has led to increased organisational engagement in this area. Medair - in a training session at their international learning event (2014) MSF-Holland - for training their Public Health team in the Netherlands (2013), as a result it has started to integrate MHM into some of their programming activities Oxfam GB - for training public health engineers in Liberia (2015 post-Ebola response) and in Nepal (2015 earthquake response) Plan Indonesia - with project staff members who facilitated the training to government officials in Nagekeo District (2015) RedR UK, SHARE & WaterAid - for a ‘Training of Trainers’ session for emergency WASH trainers (2013) Used to develop sessions for hygiene promotion staff working on the 2013 Syrian response in Lebanon In workshops for WaterAid country programmes and Water and Sanitation for the Urban Poor (WSUP) Programme Managers In training sessions at Brisbane, WEDC, University of North Carolina and University of Leeds international conferences in 2014 and 2015

POLICY/ADVOCACY	<ul style="list-style-type: none"> • Government of the Solomon Islands - informed the decision to incorporate MHM into its WASH in Schools strategy (2015) • Government of Papua New Guinea - being used by a consultant supporting the government to improve their WASH in schools guidance (2015) • WASH United - materials used for Menstrual Hygiene Day
PRACTICE	<ul style="list-style-type: none"> • UNICEF East Asia & Pacific - referred to in regional Synthesis of MHM and associated Guidance Note (2016) • WaterAid and others - to inform programmes in Bangladesh (2013-15) • FHI 360/WASHplus - to design an MHM programme in Zambia (2012) • Save the Children USA - to develop MHM implementation guidelines (2015) • Referred to/referenced in: <ul style="list-style-type: none"> • Inter-Agency Standing Committee (2015) Guidelines for Integrating Gender-Based Violence Interventions in Humanitarian Action: Reducing risk, promoting resilience and aiding recovery. • SODIS, Antenna Water & Government of Switzerland (2014), Safe Water School Training Manual, Switzerland. • SPLASH (2015) Menstrual Hygiene Management Toolkit, USA. • UNESCO, (2014) Puberty Education & Menstrual Hygiene Management, Good Policy and Practice in Health Education, France.
RESEARCH	<ul style="list-style-type: none"> • WaterAid Tanzania - to develop research tools for MHM in schools • ICRC & the University of Columbia - in R2HC-funded research to develop an inter-agency toolkit for MHM in emergencies (2015-16) • Referred to/referenced in multiple papers: <ul style="list-style-type: none"> • Hennegan, J & Montgomery, P (2016) Do Menstrual Hygiene Management Interventions Improve Education and Psychosocial Outcomes for Women and Girls in Low and Middle Income Countries? A Systematic Review. PLOS ONE 11(2): e0146985. • Rohwerder, B (2014) Non-food items (NFIs) and the needs of women and girls in emergencies (GSDRC Helpdesk Research Report 1107). Birmingham, UK. • Roose, S et al (2015) Breaking the Next Taboo: Menstrual Hygiene within CLTS, Frontiers of CLTS: Innovations and Insights, Issue 6. • Winkler, T & Roaf, V (2014) Taking the bloody linen out of the closet: Menstrual hygiene as a priority for achieving gender equality, Cardozo Journal of Law and Gender, Vol. 21, No 1, 19 March 2015, pp1-39.

3. Behaviour change via behaviour-centred design

Handwashing with soap is one of the most cost-effective ways to prevent disease and unnecessary death. Yet many people, particularly those who live in high-risk environments, fail to practise adequate hand hygiene. Recent studies have highlighted that knowledge of the benefits of handwashing alone does not typically improve handwashing practices.

In support of this, during its first phase, SHARE funded the development of the 'Choose Soap' toolkit, an innovative approach to handwashing with soap (HWWS) behaviour change. The toolkit was developed on the basis of years of research into the drivers of hand hygiene and current best practices for effective behaviour change. Following the development of the tool in 2010, it was successfully adapted and trialled in a rural Indian context.

Its success led to SHARE and the Wellcome Trust supporting the testing of a new and radical approach to HWWS behaviour change in seven Indian villages in 2011 called 'behaviour-centred design'. This theory-based approach identifies levers of behaviour change. Following the identification of disgust, nurture, and affiliation as key levers of behaviour change in the Indian villages, a creative agency developed a targeted campaign called 'SuperAmma'. A trial showed HWWS rose to 37% post campaign, six times higher than control villages, and was sustained at follow up. A process evaluation also showed major changes in perceived norms about handwashing.

This pioneering approach, and the various associated training sessions delivered, has sparked renewed interest in WASH and behaviour change. Today, 'behaviour-centred design' is being replicated in Nigeria at national scale by WSSCC. Its adaptability is also seeing it used in Indonesia in the context of maternal health and infant feeding, and in Zambia to target diarrhoeal disease-related behaviours. Its success and reach have seen the approach featured as a success story in USAID's ministerial event on ending preventable child and maternal deaths, and receive the first-ever Elsevier Atlas Award, thereby recognising the approach's potential to significantly impact people's lives around the world. SHARE has also provided funding for a start-up workshop in Bhutan (2016) that was used to plan the modification of the SuperAmma intervention, as part of a national hygiene campaign.

During its second phase, to further test this state-of-the-art approach, SHARE is funding a study in Zambia that will use 'behaviour-centred design' to enhance sanitation demand in peri-urban informal settlements. Through a cluster randomised controlled trial, the study will: 1) test the hypothesis that demand for and acquisition of improved toilets can be enhanced without intervention on the supply side; 2) identify the barriers that prevent acquisition of a toilet when demand is improved; and 3) provide learnings about what works to enhance demand and a model intervention that can be replicated in informal settlements elsewhere in Africa.

In addition to demonstrating that this novel approach can indeed be used to elicit change in a range of behaviours, not only that on which it has previously been tested (i.e. handwashing with soap), this study will provide an inspiring example of how imaginative, surprising and effective sanitation communications can be created.

Furthermore, if successful in showing that demand can significantly accelerate sanitation uptake without additional supply-side interventions (at least for some segments of the population), the study would offer a scalable sanitation intervention. For example, as a useful addition to current attempts to address urban sanitation through approaches modelled on community-led total sanitation, or as a component of sanitation marketing. It could be particularly useful in cases when a novel sanitation technology is introduced, facilitating initial rapid uptake in a cohort of households. The sanitation sector, currently in full flow in Zambia, should be well placed to take the results of the work to scale nationally.

Read more

For detailed references and more related resources and publications, please visit: <http://bit.ly/b-change>, www.choosesoap.org and www.superamma.org

4. Vaccination and hygiene promotion

Vaccination has long been deemed to be among the most successful and cost-effective public health interventions, greatly reducing the global burden of communicable disease. Despite the potential for disease control, critical childhood oral vaccinations appear to perform less well in low-income settings than high-income settings. One hypothesis for this is that chronic enteric infection, the result of exposure to faecal matter and pathogens, reduces the oral vaccine.

During its first phase, SHARE funded a study in Zimbabwe - part of the SHINE trial - that aimed to provide rigorous evidence to substantiate this plausible hypothesis. The study, results for which will be available by end 2016, aims to better understand why the polio vaccine is less immunogenic when given to children in developing countries than to children in developed countries.

Irrespective of the benefits for vaccine performance, routine immunisation campaigns may be a useful entry point for promoting safe hygiene among caregivers for young children. In 2012, an **exploratory study** in Nepal, conducted by WaterAid and LSHTM and co-supported by SHARE, revealed the acceptability and feasibility of incorporating hygiene promotion into vaccinations programmes.

Since the study, WaterAid has taken this work forward in partnership with Nepal's Ministry of Health and Population. A **first-of-its-kind pilot project** integrating hygiene promotion into the national routine immunisation programme is currently underway across four districts. If successful, the approach will be scaled up nationally, and will offer valuable lessons to national and global immunisation policy.

During its second phase, to further expand the evidence base on this important issue, SHARE would like to co-fund a proposed study led by CIDRZ, which looks at environmental enteric dysfunction on rotavirus vaccine seroconversion. Going forward CIDRZ and SHARE will be looking for co-funding to ensure this study can move ahead.

Read more

For detailed references and more related resources and publications, please visit: <http://bit.ly/WASH-vac>

5. Complementary food hygiene and nutrition

WHO estimates 45% of all child deaths are related to malnutrition. Malnourished children are more likely to get and die from infections. Children that survive chronic malnutrition suffer from irreversible effects to their cognitive, physical, social and emotional development. Poor WASH significantly contributes to the global burden of child malnutrition. WASH-related infections such as diarrhoea, schistosomiasis, soil-transmitted infections, and environmental enteric dysfunction negatively impact a child's nutritional status, and are highly prevalent among children in low-income settings.

Despite clear links, there has long been little progress bringing together WASH, nutrition, and health sectors in research and practice. As such, during its first phase, SHARE supported a [Cochrane review](#) to systematically evaluate the strength of evidence linking WASH interventions with childhood nutritional status. This first-of-its-kind study produced a synthesis of current evidence that revealed the link. Implications for policy and practice and research priorities and gaps were identified. The findings were incorporated into a training series for UNICEF staff, supported combined WASH for health and nutrition interventions, and stimulated further research on the topic globally.

Before SHARE's first phase, poor complementary food hygiene had [largely been overlooked](#) in consideration of child exposure to WASH-related diseases and there was a lack of robust evidence on food hygiene in low-income settings. As such, SHARE funded applied research studies in [Bangladesh](#), [Mali](#), [Nepal](#), and [the Gambia](#). These studies demonstrated the ability of simple and affordable behavioural food hygiene interventions to significantly reduce exposure to pathogens transmitted through complementary foods, learnings that are already influencing policy and practice globally. For example, in Nepal efforts to incorporate food hygiene into national programming are underway.

During its second phase, to further expand the evidence base on these important issues, SHARE is funding two studies. The first, taking place in [southern Malawi](#), is investigating the relative effectiveness of food hygiene and WASH community-based interventions in preventing diarrhoeal disease in children under five. The second, [in western Kenya](#) is to design and test, through a cluster randomised controlled trial, an intervention seeking to change the food preparation and infant feeding practices of under-fives' caregivers and thus reduce the prevalence of enteric infections and growth faltering among those children.

The results of the former will provide robust evidence to demonstrate the impact of these two usually separate methods of reducing diarrhoeal disease, and also identify the most probable pathways and causes. Meanwhile, the results of the latter will provide further evidence of the impact of complementary food hygiene on nutritional outcomes. They will thus have important implications for governments, NGOs and policymakers working in the WASH, nutrition and child health sectors, particularly those striving to advance integrated programming.

Cognisant of the increasing global momentum for cross-sectoral integration to deliver SDG commitments, during its second phase SHARE has also been collaborating with WaterAid to analyse national multi-sectoral nutrition plans and policies and rapidly analyse WASH plans. The intention is to provide much-needed information on the extent to which WASH and nutrition are embedded within respective plans and policies that can be used by those advocating for increased integration in the run-up to the Global Nutrition for Growth Summit taking place in Rio de Janeiro August 2016. A report is in the process of being published and preliminary findings were presented at the Brisbane WASH Futures conference in May 2016 and the European Development Days forum in June 2016, where participants provided positive feedback.

Read more

For detailed references and more related resources and publications, please visit: <http://bit.ly/comp-fh>

Annex H: Bibliometrics and publication analysis

SHARE has conducted analysis using bibliometrics data on existing publications; this data was available for 60 of the 77 publications. This analysis supports Output Indicator 2.5.

The analysis included looking at journal normalised citation impact; this measure for a single publication is the ratio of the actual number of citations to the average citation rate of publications in the same journal in the same year and with the same document type. This enables a more nuanced understanding of citation impact, as an aggregate figure can be misleading given different publication years and varying types of publication. An average figure for a single publication would be 1; any figure above 1 is above average whereas any figure below 1 is below average.

Table 17 captures some of SHARE's particularly successful papers according to this metric. It is worth noting that the number of citations does not necessarily correlate to a high journal normalised citation impact. SHARE will continue to monitor this metric over time and use it to complement our understanding of journal citations.

Table 17: Journal normalised citation impact for selected SHARE papers

SHARE Publication	Journal	Number of citations	Journal normalised citation impact
Water, sanitation and hygiene for the prevention of diarrhoea (2010)	International Journal of Epidemiology	115	4.06, above average
The relationship between water, sanitation and schistosomiasis: a systematic review and meta-analysis (2014)	PLOS Neglected Tropical Diseases	18	5.14, above average
Household environmental conditions are associated with enteropathy and impaired growth in rural Bangladesh (2013)	American Journal of Tropical Medicine and Hygiene	34	6.35, above average
Interventions to improve water quality and supply, sanitation and hygiene practices, and their effects on the nutritional status of children (2013)	Cochrane Database of Systematic Reviews	25	7.1, above average
Burden of disease from inadequate water, sanitation and hygiene in low- and middle-income settings: a retrospective analysis of data from 145 countries (2014)	Tropical Medicine & International Health	26	11.98, above average

Figure 8 illustrates the multi-disciplinary nature of SHARE research, with publications cross-cutting a number of different research areas.

Figure 8: Percentage of SHARE publications by research area⁴

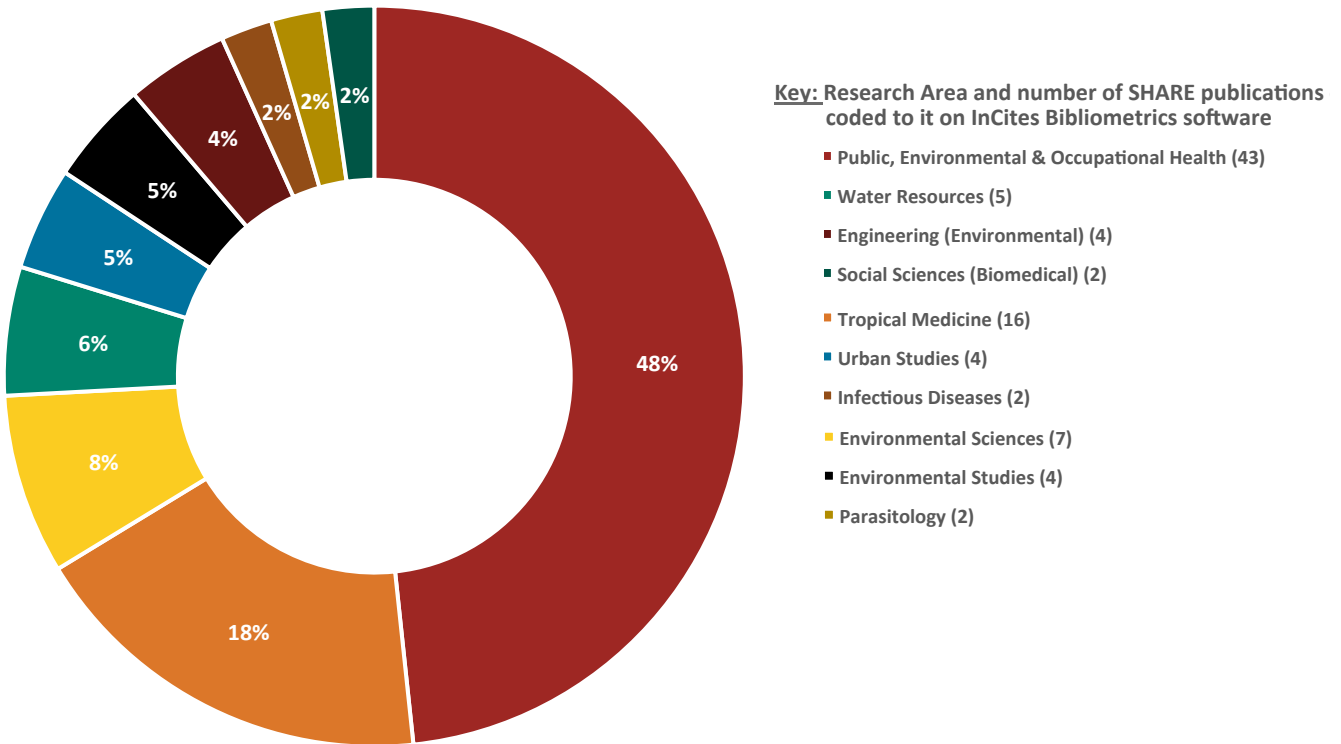
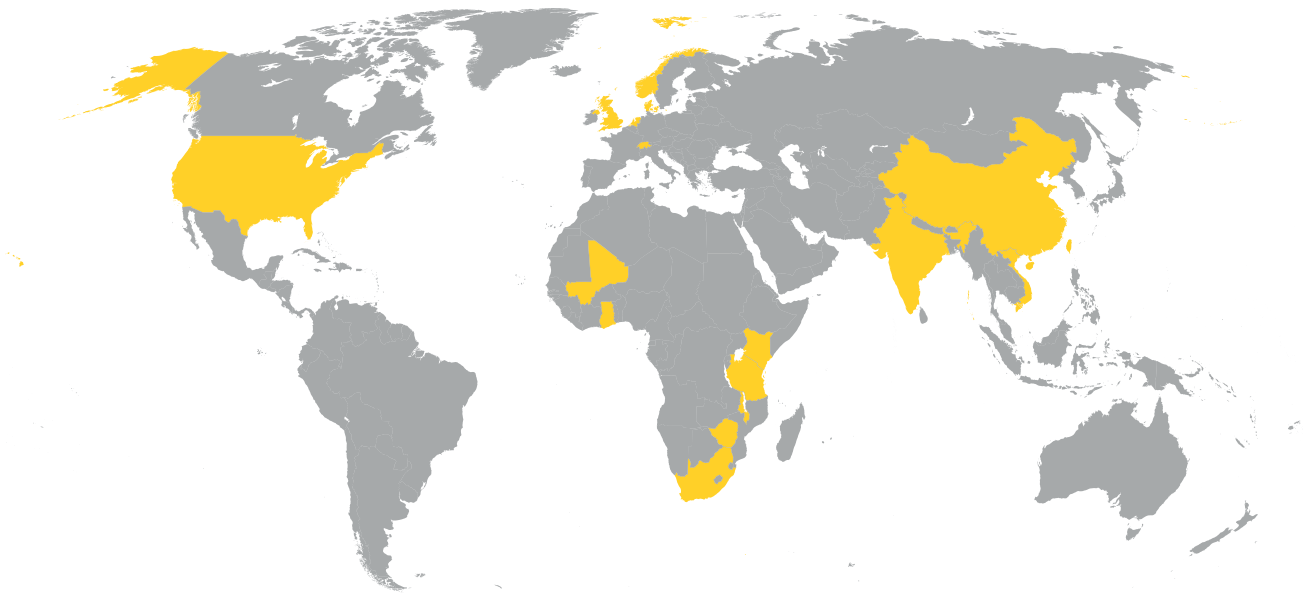


Figure 9 illustrates the diversity of SHARE’s geographic collaborations with other research institutes - each country shaded in yellow has authors from its institutions named on SHARE’s peer-reviewed journal publications.

Figure 9: SHARE’s international collaborations



⁴ Some publications are coded to two different research areas hence the high number of publications reflected in this chart.

Annex I: Infographic: Study by MEIRU in Malawi

New research: reducing diarrhoea in children under five in Malawi

Assessing the relative effectiveness of food hygiene and water, sanitation and hygiene (WASH) interventions in preventing diarrhoeal disease in U5s in Chikwawa District.



The situation

760,000 U5s die annually from diarrhoea

What we want to know

How effective are WASH and combined WASH and food hygiene interventions in reducing diarrhoea in U5s?

Research: Phase 1

Formative research - Chikwawa, Malawi

Design intervention



What we'll measure

1. Diarrhoea incidence
2. Change in no. of pathogens
3. Contamination pathways affected
4. Changes in household practices



Research: Phase 2

Cluster RCT:
20 clusters of 20 U5s from different households



Outputs

Journal papers
Toolkit
Training



Relevance

Show the impact of these methods on reducing diarrhoea & identify the pathways and causes



Find out more

www.shareresearch.org

Building knowledge. Improving the WASH sector.

The Sanitation and Hygiene Applied Research for Equity (SHARE) Consortium seeks to contribute to achieving universal access to effective, sustainable and equitable sanitation and hygiene by generating, synthesising and translating evidence to improve policy and practice worldwide. Working with partners in sub-Saharan Africa and Asia, two regions with historically low levels of sanitation, SHARE conducts high-quality and rigorous research and places great emphasis on capacity development and research uptake.

www.sharereseach.org

 @SHAREresearch

SHARE Consortium
London School of Hygiene & Tropical Medicine
Keppel Street
London
WC1E 7HT, UK

Tel: +44 (0)20 7927 2301

Email: contactshare@lshtm.ac.uk



This material has been funded by UK aid from the Department for International Development (DFID). However, the views expressed do not necessarily reflect the Department's official policies.

