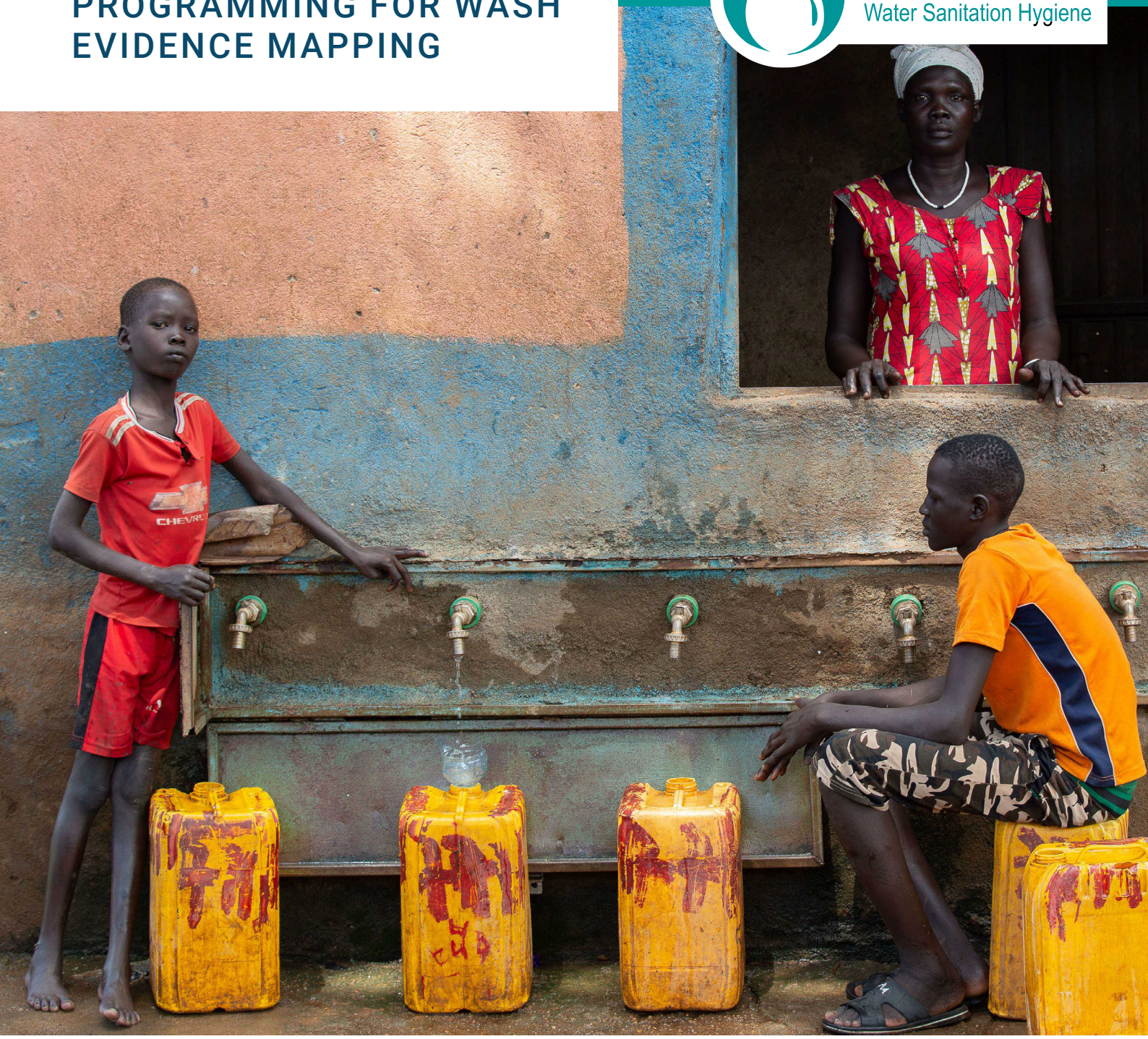
Evidence-building for cash and markets for WASH in emergencies

MARKET-BASED PROGRAMMING FOR WASH EVIDENCE MAPPING

WASH Cluster
Water Sanitation Hygiene



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

unicef

NORCAP NORWEGIAN CAPACITY | CASHCAP

Authors

Lead Authors: Jean Christophe Barbiche and Olivia Collins
Coordinators: Franck Bouvet and Dana Truhlarova Cristescu

Citation

Global WASH Cluster, Evidence-building for cash and markets for WASH in emergencies, UNICEF, Geneva, 2020.

Photo credits:

© UNICEF/UNI240622/Tesfaye (front cover)
© UNICEF/UN0469323/Dejongh (page iv)
© UNICEF/UN0379314/Tesfaye (page vi)
© UNICEF/UN0362751/Lapina (page viii)
© UNICEF/UN0403962/Franco (page xii)
© UNICEF/UNI260701/Zimmermann (page 25)
© UNICEF/UNI332256/Keïta (page 31)
© UNICEF/UNI115366/Asselin (back cover)

This publication was supported by the Cooperative Agreement numbers SM 190105, funded by the Danish International Development Agency (DANIDA) and SM200836, funded by the Swiss Agency for Development and Cooperation (SDC). We would like to thank DANIDA and SDC for their generous contributions to the Global WASH Cluster. Its contents are solely the responsibility of the authors and contributors and do not necessarily represent the official views of DANIDA and SDC.

Editing and proof-reading: Green Ink, United Kingdom (www.greenink.co.uk)

CONTENTS

FIGURES, EVIDENCE MAPS AND TABLES

WASH Cluster
Water Sanitation Hygiene

Evidence-building for cash and markets for WASH in emergencies
MBP for WASH Evidence Mapping

WASH Cluster
Water Sanitation Hygiene

Evidence-building for cash and markets for WASH in emergencies
MBP for WASH Evidence Mapping

ACKNOWLEDGEMENTS

This study is the result of the work of the Global WASH Cluster's (GWC) Markets Technical Working Group (TWiG) and has been made possible with the financial support of the United Nations Children's Fund (UNICEF), the Swiss Development Cooperation (SDC) and the Danish International Development Agency.

The study has been written and researched by Jean Christophe Barbiche (WASH Consultant) and Olivia Collins (Cash and Voucher Consultant), under the guidance and supervision of Dana Truhlarova Cristescu (CashCap Cash Advisor for UNICEF-led clusters) and Franck Bouvet (GWC Deputy Coordinator).

Many thanks to all the members of the GWC Markets TWiG who have been involved in this study from the outset and have taken precious time to extensively review the final reports. The TWiG includes members from: Action contre la Faim (ACF), British Red Cross, Cash Learning Partnership (CaLP), CARE, Croix Rouge Française, Catholic Relief Services (CRS), German WASH Network, International Committee of the Red Cross (ICRC), International Federation of Red Cross and Red Crescent Societies (IFRC), Norwegian Church Aid (NCA), Norwegian Refugee Council (NRC), Oxfam International, Relief International (RI), Save the Children, Solidarités International, UNICEF and World Vision International (WVI).

Special thanks to Pierluigi Sinibaldi (Save the Children), Alexandra Kappeler (ICRC), Eyasu Gebeto (WVI), Giulio Andrea Franco (UNICEF), Sunny Guidotti (UNICEF), Alice Golay (CaLP), Julien Eyrard and Celine Sinitsky (ACF), Jennifer Weatherall (CRS), Jennifer Lamb (CRS) and Parvin Ngala (Oxfam) for their inputs and review of this study. However, the views expressed herein are those of the authors, and any mistakes remain the authors' own.

WASH Cluster
Water Sanitation Hygiene

Evidence-building for cash and markets for WASH in emergencies

MBP for WASH Evidence Mapping

ACRONYMS

ACF	Action contre la Faim
BCC	behaviour change communication
CaLP	Cash Learning Partnership
CFW	cash for work
CVA	cash and voucher assistance
DRC	Democratic Republic of the Congo
GWC	Global WASH Cluster
HHWT	household water treatment
MBP	market-based programming
MEB	minimum expenditure basket
MENA	Middle East and North Africa
MPC	multipurpose cash
NFI	non-food item
WASH	water, sanitation and hygiene

GLOSSARY

- **Cash and voucher assistance (CVA)**: All programmes where cash transfers or vouchers for goods or services are directly provided to recipients. In the context of humanitarian assistance, the term refers to the provision of cash transfers or vouchers given to individuals, households or community recipients – not to governments or other state actors. This excludes remittances and microfinance in humanitarian interventions, although microfinance and money transfer institutions may be used for the actual delivery of cash (CaLP).
- **Emergency hygiene interventions**: In this study, interventions which aim to improve or maintain safe hygiene behaviours in emergency settings through hygiene promotion and education activities, behaviour change communication (BCC), creating an enabling environment for hygiene practices (such as hand-washing facilities), and facilitating the use of essential hygiene items. Although the package of 'essential hygiene items' varies from one context to another, the list of standard hygiene items usually includes water collection and storage containers, hand-washing soap, laundry soap and menstruation management items. Other potential items can include nail cutters, shampoo, combs, oral hygiene items, baby diapers, towels and underwear.
- **Emergency sanitation interventions**: In this study, interventions which aim to provide, restore or improve sanitation services in emergency settings through the building or repairing of human excreta containment infrastructure (such as latrines, toilets, septic tanks etc.), provision of excreta management infrastructure and services (latrine pit desludging, sludge stabilization ponds, sewage systems, wastewater treatment plants etc.) and provision of solid waste collection, recycling and disposal services.
- **Emergency water interventions**: In this study, two main groups of interventions used in emergency settings: (1) water supply interventions, which aim to supply water or improve the existing supply, for drinking and domestic use; and (2) household water treatment (HHWT) interventions, which aim to improve water quality and use through the promotion of water treatment in the home (chlorine, filters, boiling etc.) by beneficiaries. HHWT interventions are often referred to as 'point of use' interventions.
- **Labelling**: The process by which humanitarian agencies 'name' a cash intervention in terms of the outcome they want it to achieve. This may be accompanied by activities to influence how recipients use their cash assistance; for example, this could include messaging conveyed to recipients, possibly in combination with complementary programming activities (CaLP).
- **Local markets**: In this study, markets which are easily accessible to the local population or local market actors (retailers, companies). Local markets can include markets from neighbouring countries, especially for areas located close to borders. As long as supply chains between producers and consumers exist, local markets can sell goods and services which are made locally or nationally or imported from other countries.
- **Minimum expenditure basket (MEB)**: Requires the identification and quantification of basic needs items and services that can be monetized and are accessible in adequate quality through local markets and services. Items and services included in an MEB are those that households in a given context are likely to prioritize on a regular or seasonal basis. An MEB is inherently multisectoral and based on the average cost of the items composing the basket. It can be calculated for various sizes of households. A survival minimum expenditure basket (SMEB) is a subset of the MEB and refers to the identification and quantification of goods and services necessary to meet a household's minimum survival needs. Delineating the threshold for survival and differentiating a SMEB from an MEB is not currently a standardized process (CaLP).
- **Microfinance**: The provision of financial services adapted to the needs of micro-entrepreneurs, low-income persons or persons otherwise systematically excluded from formal financial services, especially small loans, small savings deposits, insurance, remittances and payment services(CaLP). When used in the water, sanitation and hygiene (WASH) sector,

microfinance can be used to support households to build a latrine, access a water filter or connect their home to the water network.

- **Modality**: The form of assistance – e.g., cash transfer, vouchers, in-kind, service delivery or a combination (modalities). This can include both direct transfers at household level and assistance provided at a more general or community level – e.g., health services, WASH infrastructure (CaLP).
- **Multipurpose cash (MPC)**: Transfers (either periodic or one-off) corresponding to the amount of money required to fully or partially cover a household's basic and/or recovery needs. All MPC transfers are unrestricted in terms of use, as they can be spent as the recipient chooses (CaLP).
- **WASH complementary programming**: Programming where different modalities and/or activities are combined to achieve WASH objectives. Complementary interventions may be implemented by one agency or by more than one agency working collaboratively. This approach can enable the identification of effective combinations of activities to address needs and achieve programme objectives. Complementary programming will ideally be facilitated by a coordinated, multisectoral approach to needs assessment and programming (CaLP).
- **WASH goods and services**: All water, sanitation and hygiene-related items and services that are usually needed in humanitarian settings. They include water, soap, water collection and storage containers, drinking water treatment services, latrine construction materials, latrine emptying services etc.
- **WASH market**: A simple system of exchange of WASH goods and services between two or more actors. A 'WASH market system' is more complex, as it refers to all the players or actors and their relationships with each other and with support or business services, as well as the enabling environment – i.e., the rules and norms that govern the way that WASH markets work. Market systems are interconnected when they share the same enabling environment/rules/norms and business/support services – e.g., when they operate within one country (CaLP).
- **WASH market-based modality**: A form of humanitarian assistance that uses, supports or develops WASH market systems before, during or after emergencies. This covers two main categories of modality in this study: WASH market support and CVA which is designed to have an effect on WASH outcomes.
- **WASH market-based programming (MBP)**: Interventions that work through or support local WASH markets. The term covers all types of engagement with market systems, ranging from actions that deliver immediate relief to those that proactively strengthen and catalyse local market systems or market hubs (CaLP).
- **WASH market support interventions**: Interventions that aim to improve the situation of crisis-affected populations by providing support to the critical WASH market systems on which they rely for accessing and using WASH goods and services. These interventions usually target specific WASH market actors, services and infrastructure through dedicated activities (e.g., grants to traders of hygiene items to enable them to repair their shops and restart businesses; training and donation of materials to private water truckers to improve their internal procedure for water chlorination etc.) (GWC Guidance on Market Based Programming).
- **WASH-specific cash**: Cash assistance which is designed to be used by recipients to achieve WASH-specific objectives. The term 'WASH-specific cash' has been developed for the purposes of this study, inspired by the CaLP definitions for 'cash transfer' and 'sector-specific intervention' (CaLP).
- **WASH-specific voucher**: Vouchers that can only be exchanged for WASH-related commodities and services. This includes 'value vouchers', which have a cash value (e.g., $25), and 'commodity vouchers', which are exchanged for predetermined goods (e.g., 20L water, soap, latrine slab etc.) or specific services (e.g., labour for latrine construction). The term 'WASH-specific voucher' has been developed for the purposes of this study, inspired by the CaLP definitions for 'vouchers' and 'sector-specific intervention' (CaLP)

WASH Cluster
Water Sanitation Hygiene

Evidence-building for cash and markets for WASH in emergencies
MBP for WASH Evidence Mapping

1. INTRODUCTION

Over recent years humanitarian aid organizations have increasingly used market-based programming (MBP) to deliver water, sanitation and hygiene (WASH) in emergencies. Market-based modalities include the distribution of cash and vouchers to enable recipient households to access the WASH goods and services they need, as well as supporting local WASH markets to deliver these goods and services at humanitarian standards. While MBP has many advantages in theory, such as contributing to economic recovery and addressing affected populations' basic needs more efficiently and effectively, what evidence is there that these approaches have actually resulted in a positive effect on WASH outcomes? This report seeks to answer this crucial question by systematically analysing and mapping available evidence of the effect of market-based modalities used in the emergency WASH sector.

The need to build a solid evidence base is not unique to MBP; the WASH sector as a whole lacks reliable evidence of the effect and impact of WASH interventions in emergencies. However, given the potential advantages of MBP, and the fact that shifting established programmatic approaches requires considerable investment by aid actors, this report focuses specifically on the evidence of MBP for WASH, to guide strategic planning and inform future research. It is intended to be read by senior WASH practitioners and humanitarian programme managers, as well as staff involved in the coordination of humanitarian assistance and decisions around funding.This evidence review is one in a series of five reports on MBP for WASH in emergencies. The other four reports in this study cover MBP practices in the water, sanitation and hygiene subsectors, and practices related to the use of multipurpose cash (MPC) for WASH outcomes. The study was commissioned by the Global WASH Cluster (GWC), with the overall aim of supporting the increased use of MBP when feasible and appropriate.

2. METHODOLOGY

For the overall study on MBP and WASH, a total of 267 documents were collected and reviewed, 51 of which were identified as including evidence of the effect of MBP on WASH outcomes and were analysed for this report.

Evidence was evaluated by estimating the effect of different cash and voucher assistance (CVA) and market support modalities on five WASH outcomes (availability, access, quality, awareness, use) and two impacts (WASH-related health and WASH market resilience). The evidence was assessed in terms of observed effect on WASH indicators and 'strength' of evidence, resulting in an evidence map for each WASH subsector and a separate map for the MPC modality. Evidence maps were used to identify emerging evidence and gaps in the evidence base, which are intended to guide the implementation of future MBP and related research in the WASH sector.

The complete database of documents reviewed during this study is available in Annex 3, and the list of documents used to produce each evidence map is available in Annex 4. The documents reviewed during this study can be downloaded here.

2.1 Research questions

Research questions for the whole study can be found in Annex 1. This report focuses on research questions related specifically to evidence mapping, as summarized below.

- Is there evidence that MBP achieves water/sanitation/hygiene outcomes?
- Is there evidence that MBP contributes to building the resilience of water/sanitation/hygiene markets to shocks?
- If evidence of the above exists:
  - Through which pathways (availability, access, quality, awareness, use) and under which preconditions are the outcomes achieved?
  - What is the evidence of the links between variations in CVA and market support programme design and implementation features and water/ sanitation/ hygiene-related outcomes?

To answer these research questions, the following methodological steps were used:

- definition of emergency WASH outcomes and impacts
- development of a causal framework for MBP for WASH in emergencies
- identification (including defining scope of search terms), categorization and assessment of the evidence.

The sections below provide details about each of these steps.

2.2 Emergency WASH outcomes and impacts

WASH interventions are implemented to achieve a wide range of outcomes and impacts, ranging from health to protection and education. There is no list of globally agreed outcomes and impacts used for WASH in emergencies. To categorize the effects of interventions, five WASH outcomes and two impacts were defined and used for the purposes of this study. They were inspired by both general WASH literature and the list of barriers to achieve humanitarian outcomes identified in the 'Basic Needs Assessment Guidance and Toolbox' (Save the Children and Okular Analytics, 2018a, p. 20).

WASH outcomes

- **WASH availability**: WASH goods and services are sold or distributed near the target population.[1]
- **Access to WASH**: The target population is able to access WASH goods and services locally, without undue difficulty.[2]
- **WASH-related quality**: WASH goods and services accessed by or delivered to the target population are reliable and meet locally agreed quality standards.[3]
- **WASH-related awareness:** The target population knows where to access and use WASH goods and services.
- **Use of WASH goods and services**: The target population has adequate WASH-related attitudes and practices based on locally agreed standards.

WASH impacts

- **WASH-related health**: WASH-related morbidity and mortality rates have decreased or remained stable among the affected population.
- **Resilience of WASH markets**: WASH-related markets are more resilient to shock.[4]

Annexes 6 and 7 provide more details on these outcomes and impacts, with a non-exhaustive list of indicators and associated concepts, as well as hypotheses on how market support or CVA interventions can have a positive effect on each outcome.

2.3 MBP for WASH causal framework

'Causal frameworks' or 'theories of change' provide a useful guide for evidence-based reviews, to unpack assumptions about how interventions intend to bring about positive changes for the affected population.

Overarching causal frameworks have previously been developed for the emergency WASH sector, organized according to activities, outputs, outcomes and impact.[5] However, as existing frameworks do not fully consider the role of markets, the following diagram has been developed for this study.

'Supply-side' interventions and outcomes (such as supporting and developing WASH-related markets, direct goods and service delivery) are presented on the right side of the diagram, while 'demand-side' interventions and outcomes (such as CVA, behaviour change communication (BCC) and social marketing) are presented towards the left side.

This conceptual framework includes market-based modalities and factors, placing them within the context of WASH interventions more generally. This is considered appropriate, as MBP is a term which encompasses almost all types of WASH interventions, provided they are implemented in a market-sensitive way (as illustrated by the variety of MBP practices reviewed in this study). Causal frameworks for each WASH subsector, based on the overarching framework above, can be found in Annex 5.

1 WASH services include related services such as drinking water treatment services, latrine emptying services etc.

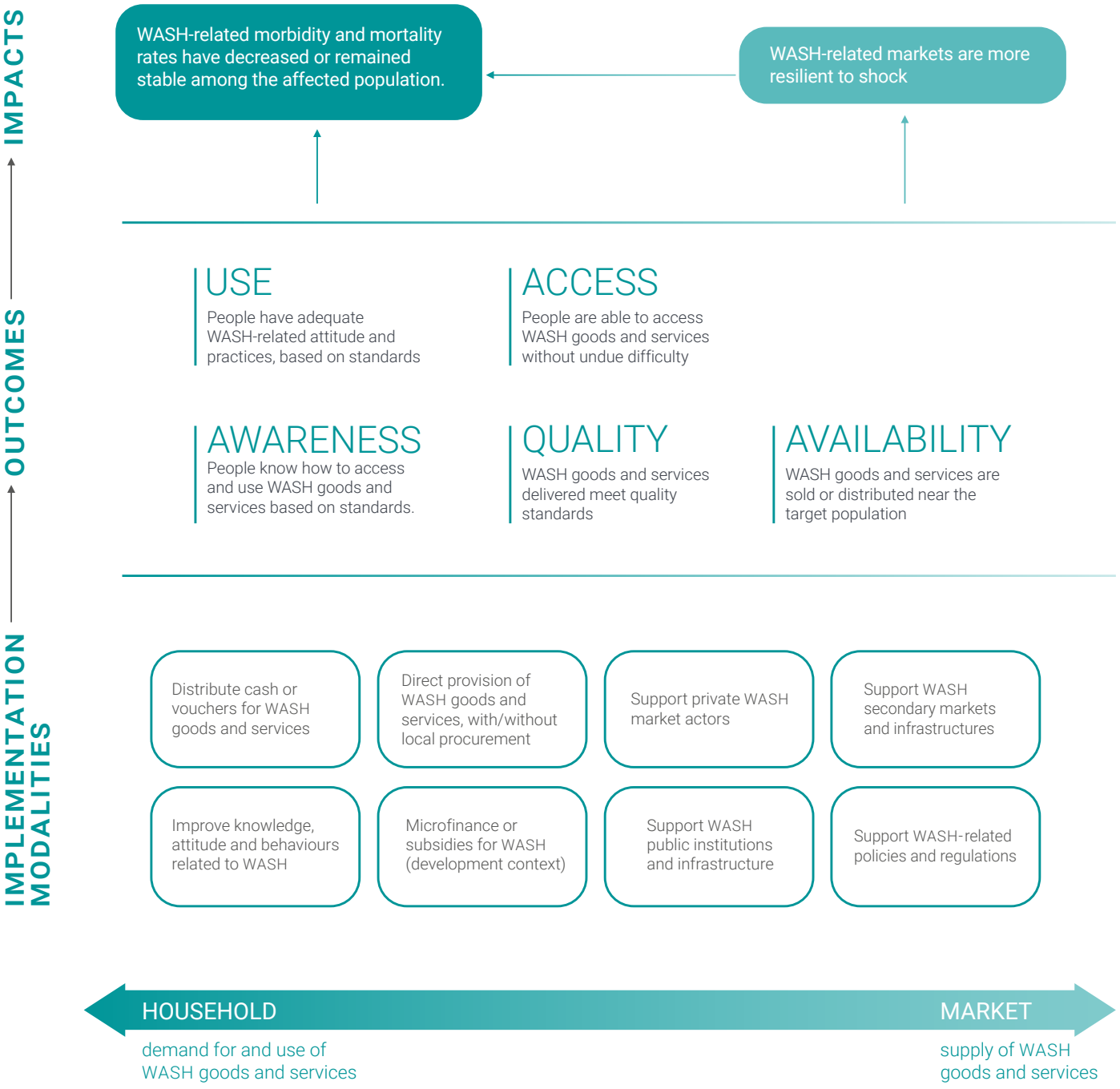
2 'Difficulty' is understood to include financial, physical and socio-cultural factors

3 WASH quality-related indicators include water supply reliability and SPHERE standards for WASH (water quality, quantity of water per person per day, distance to water point, water point management, number of people per latrine, latrine construction minimum standard and design, latrine management system, standard hygiene kit items). Service delivery quality indicators include gender equity, child protection, and satisfaction of beneficiaries.

4 Though concepts included in the 'use' outcome are similar to those included in quality, access and awareness, the focus here is on what people actually do with the water, latrine or hygiene items in their household. Achieving access and awareness is different from achieving usage; for example, people might buy good-quality soap and know the important hand washing times but still only use the soap for laundry.

5 An example of such a framework can be found in Yates, et al., 2017, p. 5.

Figure 1. *Market-sensitive emergency WASH causal framework*



2.4 Identification, categorization and assessment of the evidence

This section presents a summary of the methodology used for the study. A more detailed description of the methodology can be found in Annex 8. Documents were collected from academic, development and humanitarian-focused online resource centres and forums, and GWC partners. The following document search and screening criteria were used:

- **Market-based modalities**: Documents covering at least one of the market-based modalities listed below:
  - **market support**: social marketing, support to the private sector, support to public infrastructure or institutions, public–private partnerships, support to WASH market policies and norms, support to community-based systems;
  - **CVA**: MPC, vouchers (WASH-specific or multisectoral), cash for work (CFW), WASH-specific cash.
- **WASH subsectors**: Documents covering one of the WASH subsectors: water (water supply and household water treatment (HHWT)), sanitation[6] and hygiene. Separate evidence maps have been produced for water supply and HHWT, due to the different associated markets and MBP practices for each. It was not possible to produce evidence maps for solid waste management and vector control because of the lack of documentation regarding these two subsectors.
- **Humanitarian context**: Documents describing interventions in humanitarian contexts (rapid-onset, slow-onset, protracted crises, emergency preparedness and emergency response). Documents relating to development contexts were excluded from this evidence report (as the focus is on evidence of MBP in humanitarian contexts).[7]

A first rapid screening process excluded documents without author, date, mention of the geographical area etc. All remaining documents were then categorized and reviewed. They included market assessments, case studies, research studies, monitoring reports, guidelines etc. and constitute the knowledge base used for the four reports on WASH market-based practices. Further details about the categories used to classify the documents are included in Annex 9

A second screening process identified a subset of these documents (or parts of documents) that demonstrates or assesses the effects of MBP on WASH outcomes. It was considered 'evidence' and has been used for the present report. Evidence was classified into two categories: rigorous and non-rigorous.[8] Around 92 per cent of the documents were categorized as using 'non-rigorous' methodologies; they included case studies or lessons learned documents, project evaluations, project monitoring reports, systematic reviews and research studies that did not include control groups. In scientifically strict evidence review processes, such types of 'non-rigorous' evidence are often discarded. However, in humanitarian or emergency contexts, rigorous quantitative research is rarely conducted – due to valid ethical concerns and operational challenges – and much relevant and useful information is contained in 'non-rigorous' evidence. Therefore this 'non-rigorous' evidence was also included in the evidence mapping, while the strength of evidence score was adapted to give relatively greater weighting to the 'rigorous' evidence coming from randomized controlled trials.[9]

For each of the subsectors (water supply, HHWT, sanitation and hygiene), the strength of evidence

6 The sanitation subsector includes many different aspects; only 'excreta management', 'solid waste management' and 'vector control' aspects are addressed in this review. For ease of readability, in this report the word 'sanitation' is used for 'excreta management' and refers exclusively to it. 'Solid waste management' and 'vector control' are addressed separately at the end of section 4.

7 A few documents related to market support in development contexts were nevertheless included in the practice reviews for each subsector (practices that were selected because they were considered to have the potential to influence WASH markets in emergencies, such as studies on behavioural economics, uptake of HHWT products, or sanitation marketing pilot projects in very fragile contexts such as the DRC). These documents from development contexts were, however, excluded from the evidence mapping.

8 'Rigorous' evidence includes randomized controlled trials and experimental or quasi-experimental studies with control groups. 'Non-rigorous' includes observational, cross-sectional studies, quantitative studies using non-rigorous sampling methodology and qualitative studies.

9 This approach has been followed by a number of humanitarian WASH evidence reviews conducted by Tufts University (Yates, et al., 2017).

of the effect of market support and CVA modalities on each of the WASH outcomes (availability, access, quality, awareness, use) and impacts (health, market resilience) was assessed. Groups of evidence were thus identified for each subsector, comprising one modality and one outcome or impact. For instance, for the water subsector, one group comprises evidence of the impact of CVA on health.

A strength of evidence score was calculated for each group of evidence, using three main parameters:

- number of pieces of evidence for the group (i.e., more evidence increased the strength of evidence);
- number of pieces of rigorous evidence for the group (i.e., rigorous studies increased the strength of evidence); and
- consistency of effect (i.e., if studies showed similar direction of effect – whether positive, neutral or negative – this strengthened the evidence score, even if the studies were not all rigorous).

2.5 Study limitations

A certain number of limitations affect the validity of the evidence maps and the conclusions presented in this report. The main limitations are listed below.

- As there is no internationally agreed list of emergency WASH outcomes against which the effect of interventions can be measured, the list of outcomes used here was developed for the purpose of this report (see section 2.2 above).
- The emergency WASH outcomes defined (availability, access, use etc.) are complex and can only be measured precisely by using multiple indicators for each of them.[10] In most cases, the interventions reviewed measured only one or two of these indicators. The conclusion that an intervention had a 'positive effect' on a WASH outcome only means that one or several of the indicators of this outcome were improved as a result of the intervention, without being able to quantify this improvement and compare the effectiveness of different interventions. The evidence maps present the 'percentage of interventions that showed a positive effect' for each modality group. As there is a lack of documented evidence of MBP modalities having 'negative' or 'neutral' effect on WASH outcomes, these two categories are represented together in the evidence maps (as 0 positive effect).
- MBP is a broad term that covers all types of engagement with market systems, including implementation of market-based modalities, but also market-sensitive approaches and complementary programming. The research questions focused on 'evidence of MBP for WASH', but due to the low quality and limited number of pieces of evidence, the scope had to be reduced to 'evidence of market-based modalities for WASH' – i.e., focusing on the effect of market support or CVA on WASH outcomes, rather than assessing the effect of more holistic approaches such as conducting market assessments or combining CVA with BCC and technical assistance.
- The initial aim of the study was to estimate the effect of each market-based modality (private sector support, WASH-specific vouchers etc.) on WASH outcomes. However, analysis of the evidence revealed that effect could only be estimated for two groups of modalities (CVA and market support), as the evidence sample size was too small to draw conclusions for each individual modality.
- When market-based modalities were used in combination with other modalities (referred to as 'complementary programming' in this report), the strength of evidence was too weak to estimate the contribution of each modality to the observed effect. For interventions combining modalities (e.g., using CVA and BCC at the same time), the effect presented in the map could be the result of a number of factors (the CVA modality, the BCC or a combination of the two).
- Although preparedness is a key phase for MBP (Global WASH Cluster, 2019), most preparedness

10 See the list of proposed indicators in Table 1 of Annexes 6 and 7.

MBP practices identified were not included in the evidence maps, as their effect on outcomes during subsequent emergencies was unknown. During an emergency, it is complex for relief agencies to measure the results of preparedness actions undertaken prior to the emergency (sometimes several years previously), often by different teams. There were therefore limitations in assessing the effect of preparedness interventions on WASH outcomes.

- It should be noted that while 'WASH market resilience' is included in the conceptual framework, there was very little documentation of the effect of MBP on the resilience of WASH markets to disasters, and definitions of 'market resilience' varied greatly. Due to variations in the concept of 'resilience' and the lack of evidence, impact on market resilience was analysed separately from the other outcomes and impact, and not presented in the evidence maps.

3. DESCRIPTION OF THE EVIDENCE

This section provides a summary description of the evidence that was reviewed. Annex 10 provides additional charts showing the distribution of evidence by modality for each subsector.

3.1 Market support modalities

Twenty pieces of evidence of market support for WASH in emergencies were identified, including one rigorous study. The majority of evidence came from Haiti, Kenya, the Philippines and Syria, with some evidence also from Bangladesh, the Middle East and North Africa (MENA) region, Somalia and Zimbabwe. Most evidence for market support in the WASH sector came from protracted emergencies, during which aid actors had time to conduct market assessments and analysis. Project time frames are also generally longer in these contexts, giving more flexibility to implement indirect modalities such as market support. No evidence of the effects of market support in first-phase emergency WASH response was found, which is a notable gap in the evidence base. The only rigorous evidence measuring the effect of market support on WASH outcomes came from a context of protracted emergency, in which water safety plans were implemented during the conflict in southern Syria (Sikder, et al., 2018).

A range of different market support modalities were used in each WASH subsector, as described below.

Water supply

There were 15 examples of market support modalities with measured effect on water supply outcomes in the evidence base. The modalities were grouped as follows:

- **Support to the private sector:** These modalities provided support to private companies to sell good-quality water or water-related products or services as an emergency preparedness measure or during emergencies. The main examples reviewed were:
  - financial and technical assistance provided to private and public water kiosks in urban areas supporting water trucking companies in terms of water quality procedures or fuel
  - improving linkages between communities and water trucking companies
  - supporting supply chains for spare parts for handpumps.
- **Support to community-managed systems**: Setting up and supporting community-managed structures such as water users' associations or committees is a common practice in the WASH sector. The recent focus of MBP reconsiders these practices with a new market-focused lens. For example, Oxfam provided water users' associations in Kenya with free fuel vouchers so that they could pump and distribute water free of charge to users during a period of drought (Wildman, 2012). Other interventions included realistic cost recovery systems and commercial viability of water point management by water committees, as well as improving linkages between committees and private water actors such as water trucking companies or retailers of spare parts for handpumps.
- **Support to public infrastructure or institutions**: This consisted mostly of the provision of financial and technical assistance to public or semi-public water utilities (piped water networks, treatment plants, pumping stations) to resume their operations or allow them to function during emergencies.

HHWT

The six pieces of evidence that showed the effect of market support modalities on HHWT outcomes all came from only two interventions, which were implemented in Haiti and Zimbabwe (Villeminot, 2017; Ngala and Whitehouse, 2019). In these examples, agencies aimed to improve the uptake of HHWT in

preparedness or during protracted crises through a combination of social marketing, support for HHWT product retailers and distribution of vouchers.

Sanitation

Five pieces of evidence of the effect of market support on sanitation outcomes were reviewed. Below is a description of the modalities used.

- **Social marketing and microfinance**: One sanitation marketing intervention was included in the evidence map, implemented by Oxfam in the Philippines as an emergency recovery intervention after Typhoon Haiyan (Juillard, 2017). The same intervention also included microfinance and vouchers for materials – in addition to promoting latrines and adapting the sanitation market to demand, some vulnerable beneficiaries were also able to purchase materials at a discounted price using their voucher, and take out a loan to complete the latrine construction. A number of other sanitation marketing and microfinance modalities for sanitation were reviewed but not retained for the evidence maps, as they were implemented in non-emergency contexts.
- **Support to community-managed systems and cash for work (CFW)**: This refers to an example from Kenya where community latrines (shared by a number of households) were constructed through CFW (Schira, 2011).
- **Support to private sector and support to public infrastructure**: One intervention in Lebanon used both of these modalities to ensure that the contractors removing the sludge from informal tented settlements for Syrian refugees would dispose of the waste in formal wastewater treatment plants with a cost recovery system for the government (Oxfam, 2018d).

Hygiene

Four examples showing the effect of market support on hygiene outcomes were included in the evidence mapping. Below is a description of the market support modalities used in these examples.

- **Social marketing**: This includes an example from Action contre la Faim (ACF) in Haiti, where marketing techniques were used to improve both the availability of and demand for jerrycans with taps, as well as HHWT products (Villeminot, 2017).
- **Support to the private sector**: Only a few examples of private sector support for hygiene outcomes were identified in this evidence review. As markets for hygiene items such as soap or shampoo are often dynamic and competitive, they respond well in many emergency contexts (such as Lebanon, the Philippines or even Haiti and Somalia), reducing the need for specific support. The evidence identified includes an intervention to improve the flood preparedness of hygiene material vendors in Bangladesh through adequate item stocking and training on how to use e-vouchers (Parkinson, et al., 2019). In Haiti, the use of non-food item (NFI) vouchers for hygiene materials, implemented during earthquake recovery, included strong and successful support to private vendors (Oxfam, 2011).

3.2 CVA modalities

Fifty-seven pieces of evidence for CVA were identified, nine of which were from rigorous studies. In terms of geographic spread, most evidence came from the MENA region (particularly Jordan and Lebanon), the Democratic Republic of the Congo (DRC), Ethiopia and Haiti. There was some other significant evidence from Bangladesh, Kenya, the Philippines and Somaliland, as well as individual pieces of evidence from Afghanistan, Central African Republic, Columbia, Greece, South Sudan and Yemen.

Only one piece of evidence of the effect of CVA on WASH in preparedness was identified, concerning flood preparedness interventions in Bangladesh (Parkinson, et al., 2019). Other CVA for WASH preparedness practices were identi-

fied, but evidence of effects was not measured in these documents. Six pieces of evidence of CVA for WASH in rapid-onset emergency response were identified, all of them categorized as low to very low strength. The rigorous evidence available all came from interventions implemented in protracted emergencies.

CVA evidence came from interventions using different modalities: MPC, WASH-specific cash, WASH-specific vouchers, multisectoral vouchers and CFW (as described below).

Water supply

For water supply outcomes, the evidence base included 21 examples of the use of CVA modalities. The modalities are listed below (starting with the modality for which there was the most evidence).

- **MPC**: This category consists of monitoring water-related expenditure of MPC, such as purchasing water or paying water bills, with 10 examples of evidence from Ethiopia, Jordan, Lebanon, Somalia and Yemen.
- **WASH-specific vouchers**: This category refers to the use of water vouchers, with eight examples from Central African Republic, Ethiopia, State of Palestine and Somaliland. No evidence of the use of multisectoral vouchers was identified for water supply or HHWT.[11]
- **CFW**: Two interventions were identified, both in Kenya, where a small percentage of the cash assistance received through CFW was spent on water (Brewin, 2009; ELRI, 2011).
- **WASH-specific cash**: This refers to one piece of evidence: an intervention in Somaliland which combined the use of community-level cash grants to improve water supply and cash transfers to households to purchase water (Oxfam 2020).

HHWT

No evidence of the effect of CVA on HHWT outcomes was identified in this review.

Sanitation

There were 10 pieces of evidence in which CVA modalities had an effect on sanitation outcomes:

- **WASH-specific cash**: This refers to cash for latrine construction, through conditional instalments (or 'tranche payments') of cash, in which recipients of the cash are responsible for the latrine construction for their household and use the cash assistance to purchase materials and/or labour. There were five pieces of evidence from DRC, Iraq, Lebanon and Philippines.
- **MPC**: Reported expenditure of MPC on sanitation-related costs (access to desludging services) or effect on access to sanitation facilities (access to household latrines), with three pieces of evidence from Jordan (Abu Hamad, et al., 2017; UNHCR, 2016) and Somalia (Kipchumba, 2019).
- **WASH-specific vouchers**: Two pieces of evidence assessed the effect of vouchers for latrine construction materials in the Philippines (Denis Le Sève, 2019) and vouchers for latrine desludging in Lebanon (UNHCR, 2016).

Hygiene

For CVA and hygiene, there was more evidence than for other WASH subsectors, with 31 pieces of evidence of the effect of CVA modalities on hygiene outcomes, as follows.

- **WASH-specific vouchers**: There were 16 examples of vouchers to be exchanged for hygiene items, used in a variety of contexts (Bangladesh, Colombia, Ethiopia, Haiti, Lebanon and Syria). For example, in Ethiopia, Sudanese refugees received both WASH-specific vouchers (e-vouchers restricted to hygiene items) and multisectoral vouchers (e-vouchers that could be exchanged for a variety of goods stocked by the vendor, such as food and clothes) as part of the same intervention, to reduce the risk of hygiene items being re-sold (Seifu and Skare, 2019).

11 'Multisectoral vouchers' refers to vouchers that can be exchanged for a wide range of commodities, including water or HHWT. While no 'evidence' of the effect of such an intervention was found, examples of this 'practice' are included in the MBP for water practice report (e.g., vouchers that can be exchanged for food and non-food items, including HHWT).

- **MPC**: There were eight examples of reported expenditure of MPC on hygiene items (DRC, Greece, Jordan and Lebanon).
- **Multisectoral vouchers**: Hygiene items purchased with vouchers that could be exchanged for a wide variety of different goods, including – but not restricted to – hygiene. There were six pieces of evidence of the use of this modality – e.g., multisectoral vouchers used in NFI fairs in DRC (AIR, 2017; Quattrochi, et al., 2019; UNICEF, 2011), or winterization vouchers for Syrian refugees in Jordan, which included some hygiene-related items (NRC, 2015).
- **CFW**: There was one example from Kenya where hygiene promotion (BCC) was used in conjunction with CFW for household latrines and digging waste disposal pits (Schira 2011).

3.3 MPC modality

While MPC is a form of CVA, it is widely used; therefore an evidence map has been produced specifically for this modality. It should be noted that the evidence map for MPC is different from the other evidence maps, as it groups together evidence relating to the effect of this particular modality on all three WASH subsectors: water supply, sanitation and hygiene promotion (no evidence relating to MPC and HHWT was found in this review).

MPC is also included in the evidence maps for each WASH subsector, aggregated together with all other CVA modalities, but in the MPC evidence map it is presented alone, to assess the specificities of evidence on MPC for WASH.

The review included 13 pieces of evidence for which the effect of MPC on WASH-related outcomes was measured. The evidence came from Afghanistan, DRC, Ethiopia, Greece, Lebanon, Jordan, Somalia and Yemen. MPC is a widely used modality, and not all evidence related to MPC could be included here; interventions that included MPC but did not monitor the effect on WASH outcomes were therefore excluded from this evidence review.

4. RESULTS AND EVIDENCE MAPS

To present an overview of the evidence of market-based modalities for WASH, evidence tables were created for each WASH subsector, as well as a separate one for MPC for WASH. Evidence tables can be found in Annex 10. Visual representations are presented in the evidence maps below. The list of documents used to create each evidence map can be found in Annex 4.

Reading the evidence maps

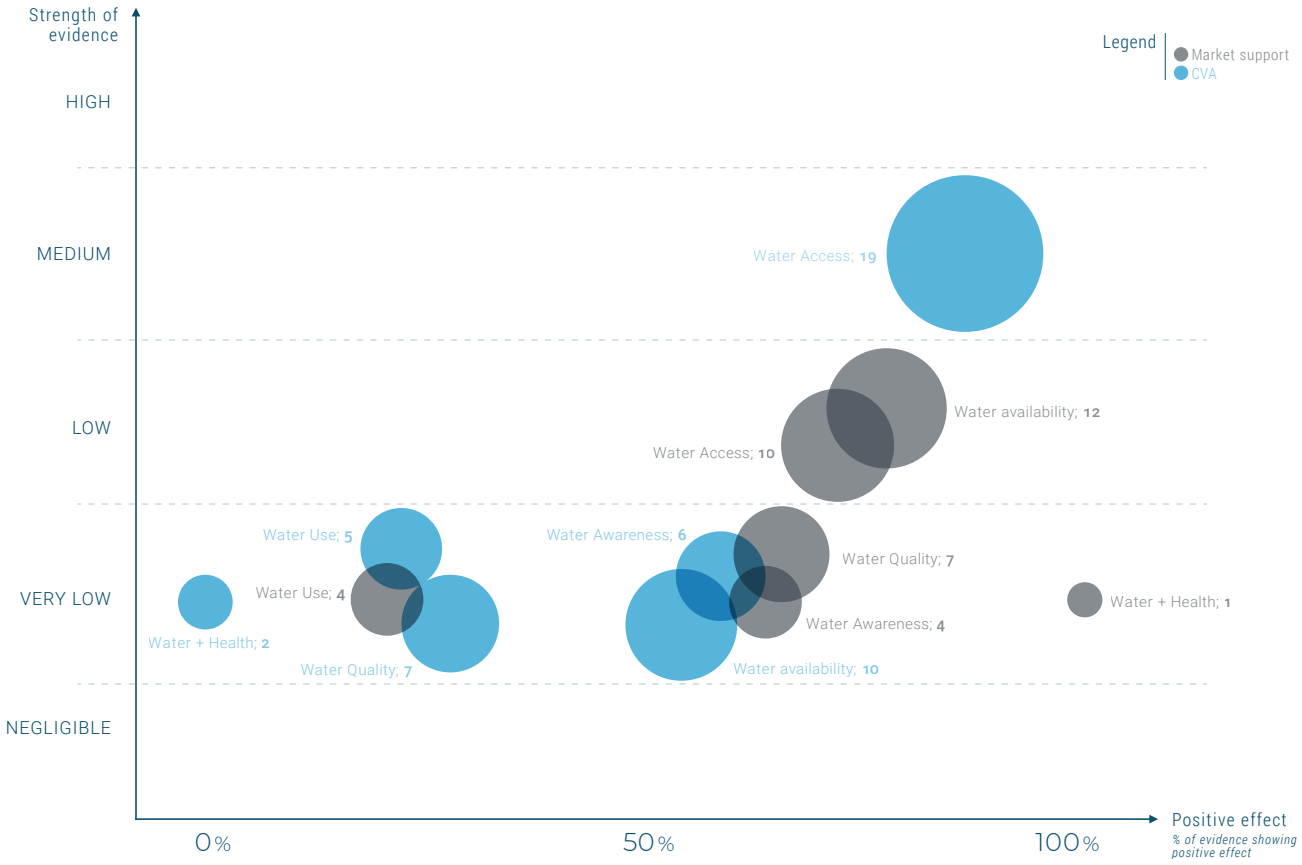
The maps present two parameters: strength of evidence (see section 2.4 on methodology and Annex 8 for more details), and direction of effect on WASH outcome (based on the proportion of studies measuring this outcome and showing positive effect). Each circle in the evidence map represents an outcome or impact (such as 'water access'). The size of the circle is proportional to the number of pieces of evidence that measured this outcome. Market support modalities are shown in green circles, while CVA modalities are shown in beige.

Circles in the top right-hand corner have a higher level of evidence, and the majority of this evidence shows positive effect, while circles in the bottom left-hand corner have a lower level of evidence, and the majority have not shown a positive effect on the outcome/impact. The following should be noted:

- The absence of positive effect means, in most cases, a neutral effect (i.e., the modality failed to improve baseline WASH indicators). Almost no measured negative effects (i.e., the modality worsened the baseline WASH indicators) were identified in the evidence reviewed, hence negative effects have not been presented in the evidence maps.
- Direction of effect of the modality (whether positive or not) should be taken cautiously, as the level of evidence supporting it is generally low.

4.1 Water supply

Evidence map 1. *Effect of market-based modalities on water supply outcomes*



How to read the evidence map

- The blue circle **'Water access; 19'** means that 19 pieces of evidence reviewed measured the effect of **CVA** on **'water access'** (the size of the circle is proportional to the number of studies). The strength of the evidence of the effect of **CVA** on '**water access**' is medium, and the effect of **CVA** on this outcome was generally positive (~100 per cent positive effect).
- The grey circle **'Water use; 4'** means that four pieces of evidence reviewed measured the effect of **market support** on **'water use'**. The strength of the evidence of the effect of **market support** on **'water use'** is very low, and the effect of **market support** on this outcome was generally not positive (only ~25 per cent of evidence showed a positive effect).

Analysis of the MBP for water supply evidence map

Market support for water supply

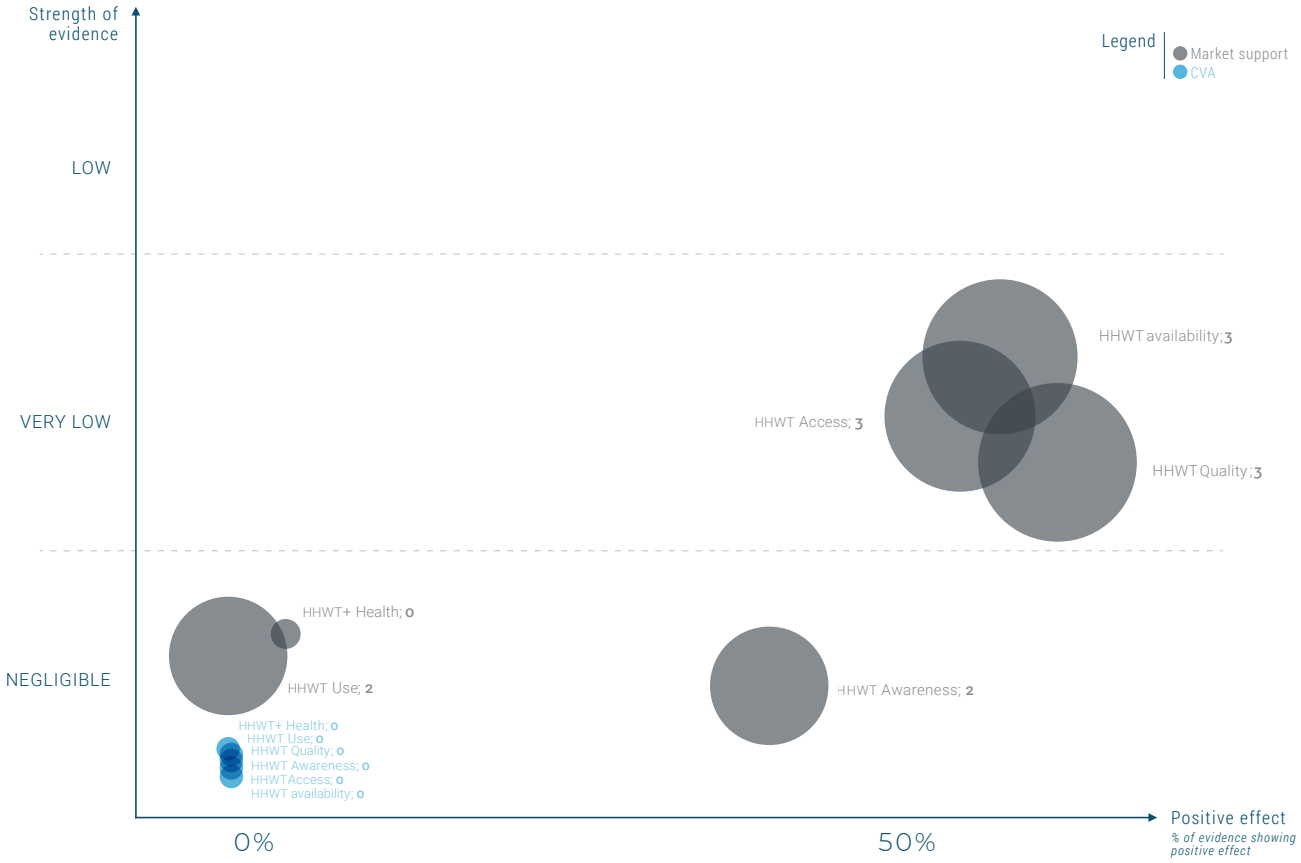
- There is low strength of evidence for the effect of market support modalities on both water availability and access. Though there are 12 pieces of evidence for availability and 10 for access, as well as a general convergence towards a positive effect on these two outcomes, there is only one rigorous study, which accounts for the low strength of evidence.
- There is very low evidence of market support modalities having an effect on quality, awareness and use, although the effect on these outcomes is consistently positive, with the exception of water use, on which market support had a mostly neutral effect.
- There is very low evidence of the positive effect of market support modalities on WASH-related health outcomes. Only one rigorous study was reviewed, showing a positive impact: the water safety plans set up during the conflict in southern Syria included support to local water markets (private water trucking and public water networks) and led to a measurably positive effect on free residual chlorine at household level, which was protective for childhood diarrhoea (Sikder, 2018).

CVA for water supply

- There is medium strength of evidence for CVA modalities having a positive effect on water access (19 pieces of evidence, the majority of which showed a positive effect on access, including all 3 rigorous studies, which showed a positive effect). The CVA modalities showing an effect on access included: MPC, where a small percentage of the cash assistance was used to purchase water or pay water bills (examples from Jordan, Lebanon, Somalia and Yemen); water vouchers (Central African Republic, Ethiopia, State of Palestine and Somaliland); and community and household cash transfers for water (Somaliland) and CFW, where the cash received by households was used to purchase water (Kenya).
- For all other outcomes and impact (availability, quality, awareness, use and WASH-related health), there is very low strength of evidence. These were measured primarily for water vouchers but almost never measured for MPC. This difference in monitoring is understandable, since water vouchers aim specifically to deliver water, so monitoring focuses more on water-related outcomes than does the monitoring for MPC.
- For water awareness and availability, the strength of evidence is very low, though some CVA modalities were found to have a measurable and positive effect on availability, in addition to their intended positive effect on access. The effect on both awareness and availability was mostly linked to water vouchers – e.g., in Gaza (Oxfam, 2013), Somaliland (Wildman, 2012; Oxfam, 2020) and Syria (Lamb, 2015). There was only one reference to the positive effect of MPC on availability; in this example, it was stated that the sheer scale of MPC delivery in Somalia had a general effect on the availability of goods (all types of goods, not specific to WASH) (Hedlund, et al., 2012).
- For quality, the strength of evidence is also very low, though there was some measurement of quality in the case of water vouchers. For example, in Gaza, it was reported that "80% of 500 beneficiaries of the water voucher scheme have access to drinking water free from faecal contamination" (Oxfam, 2013).
- For health, the strength of evidence is very low, with only two pieces of evidence, which showed that CVA modalities had no effect on WASH-related health outcomes (see section 4.7 for further details on WASH-related health).

4.2 HHWT

Evidence map 2. *Effect of market-based modalities on HHWT outcomes*



How to read the evidence map

- The blue circle 'HHWT availability; 0' means that none of the evidence reviewed measured the effect of CVA on 'HHWT availability' (the size of the circle is proportional to the number of studies). The strength of the evidence of the effect of CVA on 'HHWT availability' is negligible, and there is no evidence of a positive effect on this outcome (~0 per cent positive effect).
- The grey circle **'HHWT quality; 3'** means that three pieces of evidence reviewed measured the effect of **market support** on **'HHWT quality'**. The strength of the evidence of the effect of **market support** on **'HHWT quality'** is very low, and the effect of market support on this outcome is mixed (~50 per cent of evidence showed a positive effect).

Analysis of the MBP for HHWT evidence map

Market support for HHWT

The level of evidence for HHWT market support modalities in emergencies is either very low or negligible, with only three pieces of evidence reviewed. For example, ACF used marketing techniques to improve the sale of chlorine solution in Haiti, with some positive effects on availability (i.e., profit for vendors), access (i.e., people bought chlorine) and quality (i.e., people were satisfied with the modality), but no positive effects were identified in terms of the actual use of HHWT and water quality at household level.

CVA for HHWT

None of the documents reviewed contained evidence of the effect of CVA modalities on HHWT outcomes in humanitarian contexts. Some robust evidence was found on the effect of free and subsidized vouchers (which partially covered the cost) for chlorine, but these projects or studies were implemented in development contexts without any link to emergency response and were therefore not included in the evidence maps presented here (Ashraf, et al., 2008; Dupas, et al., 2013; 2020; Ritter, et al., 2017; Whitehouse, et al., 2017).

4.3 Sanitation

Analysis of the MBP for sanitation evidence map

Market support for sanitation

The overall strength of evidence for market support modalities used to achieve sanitation outcomes is either very low or negligible. Only three documents passed the evidence screening process. These three pieces of evidence all showed market support modalities to have a positive effect on access to sanitation systems, through microfinance, social marketing and support to a private wastewater collection company (Denis Le Sève, 2019; Oxfam, 2018d; Schira, 2011). In two of these interventions, the effect on sanitation availability and quality outcomes was also measured, with mixed effect. Only one intervention (CFW supporting the construction of private latrines) showed a positive effect on the use of sanitation facilities by beneficiaries (Shira, 2011). None of the evidence measured the effect of market support modalities on WASH-related health.

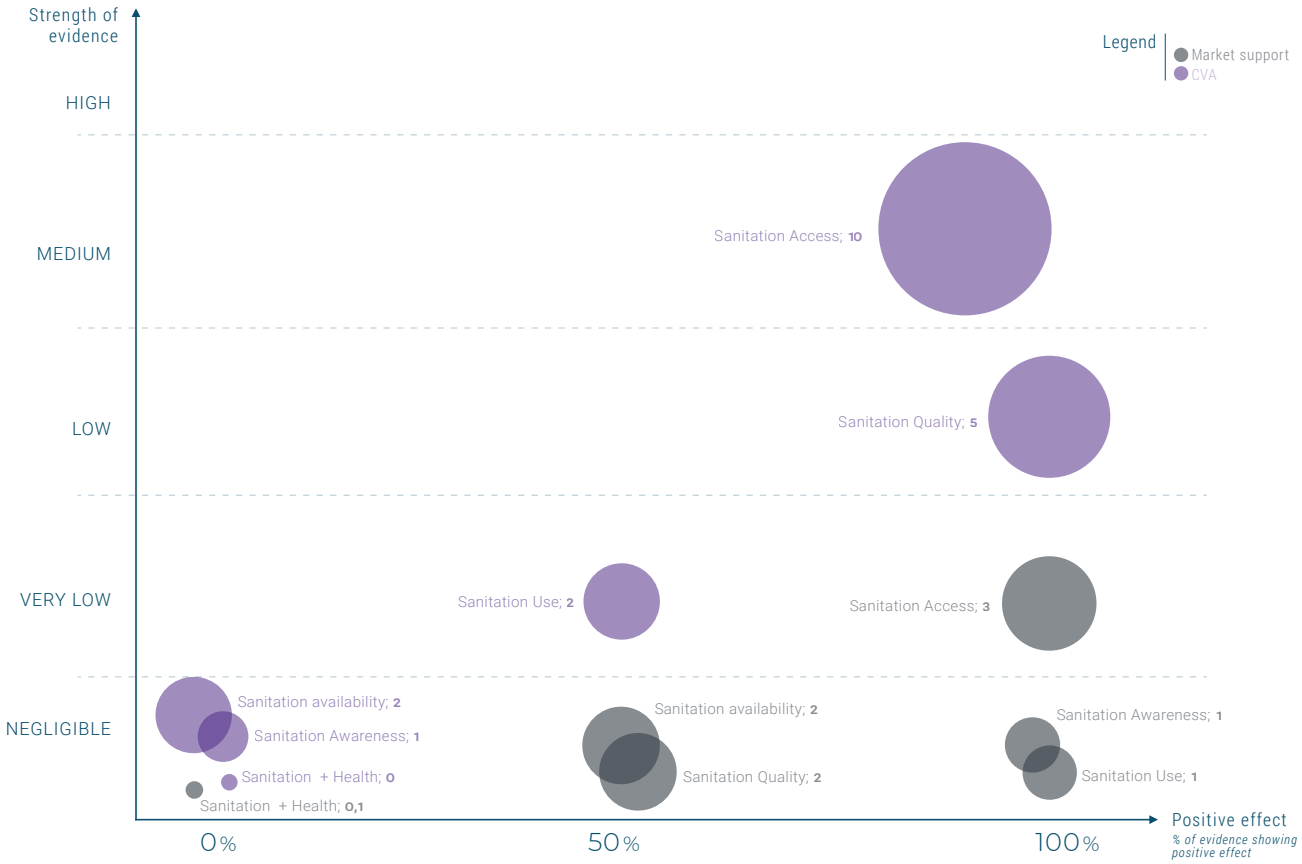
CVA for sanitaton

The strength of evidence of the effect of CVA modalities on sanitation is very mixed across the different outcome and impact areas, as detailed below.

- There is medium strength of evidence for the positive effect of CVA on access to sanitation Eight of the ten pieces of evidence showed a positive effect (including one rigorous study). For example, assistance provided through MPC to Syrian refugees in Jordan had a markedly positive effect on improving access to toilet facilities by reducing the number of households sharing toilets (with other households) from 30 per cent at baseline to 20 per cent after receiving MPC (Abu Hamad, et al., 2017).[12]
- There is low strength of evidence for the positive effect of CVA modalities on sanitation quality, driven by WASH-specific approaches that used conditionality or restrictions to ensure the achievement of desired outcomes. This evidence included the following modalities: conditional instalments (or 'tranche payments') for latrine construction in Lebanon (King, et al., 2014), the Philippines (Ahmed and Hrybyk, 2016) and Iraq

12 Sharing of toilets (rather than household toilets) was an indicator of overcrowding, and a reduction in sharing of toilets was considered an indicator of improved access to sanitation. In the report reviewed, no mention is made of additional activities (such as messaging around sharing of toilets or labelling of cash for construction of toilets) to achieve this result. The report presents this reduction in sharing of toilets as being a result of the MPC assistance (Abu Hamad, et al., 2017, p. 65).

Evidence map 3. *Effect of market-based modalities on sanitation outcomes*



How to read the evidence map

- The purple circle **'Sanitation availability; 0'** means that none of the evidence reviewed measured the effect of **CVA** on **'Sanitation availability'** (the size of the circle is proportional to the number of studies). The strength of the evidence of the effect of **CVA** on **'Sanitation availability'** is negligible, and there is no evidence of a positive effect on this outcome (~0 per cent positive effect).
- The grey circle **'Sanitation quality; 3'** means that three pieces of evidence reviewed measured the effect of **market support** on **'Sanitation quality'**. The strength of the evidence of the effect of **market support** on **'Sanitation quality'** is very low, and the effect of market support on this outcome is mixed (~50 per cent of evidence showed a positive effect).

(NRC, 2019), vouchers for latrine construction in the Philippines and vouchers to pay for latrine desludging in Lebanon (both examples from Denis Le Sève, 2019). The effect of CVA on sanitation quality was only measured in the WASH-specific approaches described above; it was not measured in the MPC interventions.[13]

- There is very low strength of evidence for use and negligible evidence regarding availability, awareness and health. This lack of evidence is because the interventions reviewed that included CVA modalities were generally monitored at output level (indicators of access – e.g., number of vouchers redeemed, cash transfers received, how the cash was spent or access to a latrine), and other outcomes or impact were rarely measured.

4.4 Hygiene

Analysis of the MBP for hygiene evidence map

Market support for hygiene

Only four interventions using hygiene market support modalities were identified, none of which used rigorous monitoring. The strength of evidence is low for availability, access and quality outcomes, and negligible for effect on awareness, use and health. The two examples below illustrate these results.

The ACF market support project in Haiti had a positive effect on availability (the profit and capacity of 15 jerrycan retailers improved), access (750 beneficiaries purchased jerrycans with taps), quality (jerrycan design followed locally agreed standards) and awareness (people knew where to buy jerrycans and were instructed by vendors and project teams on how to use them). Use, however, was not monitored (Villeminot, 2017).

- The Oxfam flood preparedness market support project in Bangladesh produced a positive effect on access and availability during subsequent flooding: pre-agreed contracts with selected suppliers were used, suppliers had adequate stock, and e-vouchers and other CVA modalities were easily used by beneficiaries to access hygiene material (Parkinson, et al., 2019). However, the use of hygiene items was not monitored. Based on the key informant interview conducted with Oxfam staff, it seems that many beneficiaries may also have exchanged the hygiene items they received through vouchers, for non-WASH commodities.

CVA for hygiene

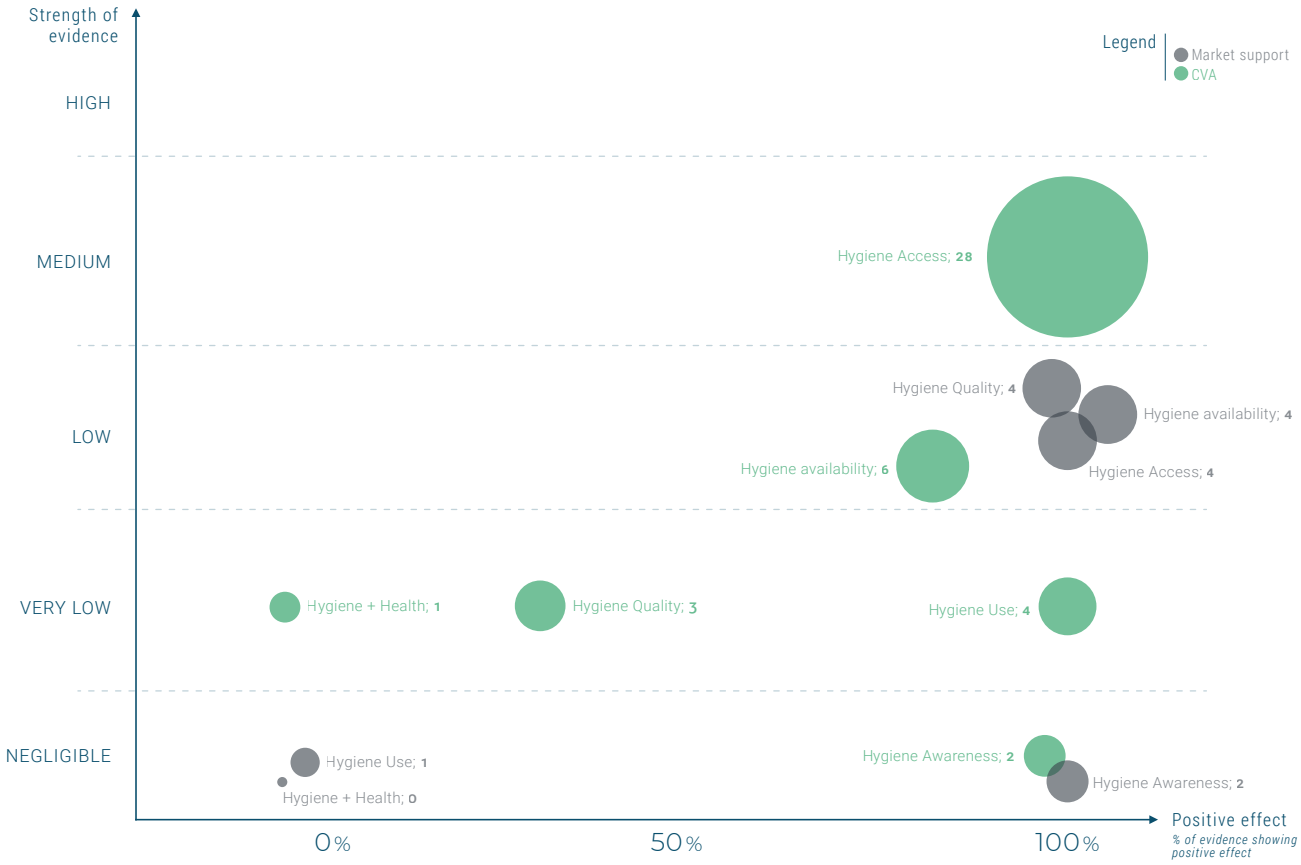
Twenty-eight pieces of evidence were reviewed, four of which had rigorous methodology. As for other WASH subsectors, for hygiene the effect of CVA on access is frequently measured, resulting in a medium level of evidence for access but much lower levels of evidence for availability, quality, awareness and use of hygiene items. There is negligible evidence of the effect of CVA modalities on WASH-related health outcomes.

As for water supply and sanitation, the effect on hygiene outcomes other than access (availability, quality, awareness and use) was measured primarily by WASH-specific CVA approaches (such as vouchers for hygiene NFIs), but not measured for MPC, leading to less overall evidence.

- All of the evidence that measured access to hygiene items showed a positive effect. For example, in DRC at NFI fairs, 23 per cent of households spent some of their multisectoral vouchers on hygiene items, though the actual value was only 5 per cent of the value of the voucher: soap (2 per cent), washing materials (2 per cent) and containers and jerrycans/water barrels (1 per cent) (CaLP, 2012). In Jordan, 17 per cent of the value of multisectoral vouchers (designed for winterization) was spent on hygiene items (NRC, 2015a).

13 The lack of measurement of sanitation quality for MPC modalities is not unexpected, since MPC can have such a wide range of different impacts, and it is challenging to monitor effects in every area, especially through post-distribution monitoring.

Evidence map 4. *Effect of market-based modalities on hygiene outcomes*



How to read the evidence map

- The green circle **'hygiene access; 28'** means that 28 pieces of evidence reviewed measured the effect of **CVA** on **'hygiene access'** (the size of the circle is proportional to the number of studies). The strength of the evidence of the effect of **CVA** on **'hygiene access'** is medium. The effect of **CVA** on this outcome is positive (~100 per cent of evidence showed a positive effect).
- The grey circle **'hygiene use; 1'** means that only one piece of evidence reviewed measured the effect of **market support** on **'hygiene use'**. The strength of the evidence of the effect of **market support** on **'hygiene use'** is negligible, and there is no evidence of a positive effect of **market support** on this outcome (~0 per cent positive effect).

- The effect of CVA on the availability of hygiene items on the market was only measured with regard to voucher modalities, and positive effects were observed in five out of six cases. For example, in DRC, voucher fairs brought traders into areas where beneficiaries were located, and "65% of families reported that the items they purchased at the fairs are not easily available in their local shops or markets" (CaLP, 2012).
- For awareness, positive effects were noted in Somalia, where e-vouchers for hygiene items, delivered via mobile money, were combined with SMS messaging around polio prevention (Oxfam, 2015b).
- Positive effects on the use of hygiene items and hygiene practices were noted. For example, in an intervention in Kenya – where hygiene promotion was used in conjunction with unconditional cash, CFW for household latrines and digging waste disposal pits – it was reported that "78% of the respondents declared disposing their children's stools in the pit latrine against 10% at the baseline time" (Schira, 2011).
- The evidence of CVA for hygiene having an impact on health outcomes is negligible; only one piece of rigorous evidence measured the effect of NFI voucher fairs in DRC on health (using the indicator of children's physical health), with no observed impact (Quattrochi, et al., 2019) (see section 4.7 on WASH-related health for more details).

4.5 MPC

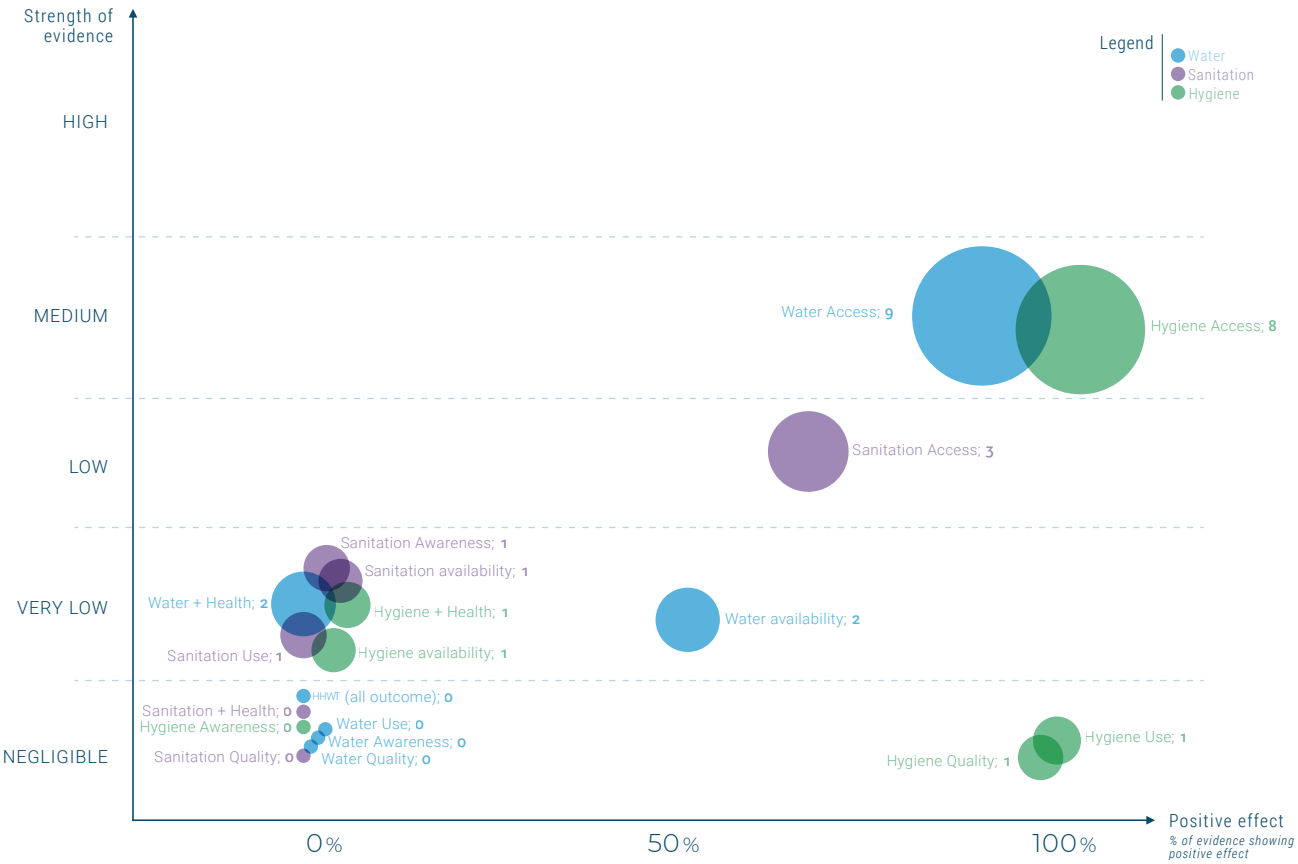
Analysis of the MPC for WASH evidence map

There is evidence of MPC having a positive effect on access to WASH, with medium strength of evidence and greater positive effect for hygiene and water supply, though weaker evidence and less positive effect for access to sanitation. In the evidence reviewed, access was mostly measured through expenditure indicators such as percentage of MPC spent on WASH goods and services, or by analysing overall household expenditure patterns. Examples of spending included buying water (either purchasing water outside the home or paying water utility bills for piped water in the home), buying hygiene items and paying for desludging of latrines.

The effect of MPC on WASH availability, quality, awareness and use was rarely measured; when it was measured, little or no positive effect was found on these outcomes. There are various reasons for the lack of monitoring related to these WASH outcomes, such as the following.

- MPC is usually implemented in contexts where the supply of WASH goods and services is deemed adequate (e.g., in large cities in Turkey or Peru) and where agencies and donors consider that it is not necessary to monitor indicators of WASH availability. However, this might be just a perception, and WASH goods and services may not be adequate. For example, during the Syrian refugee crisis, in Gaziantep (Turkey) in 2017–2018, although water availability and access in the city was considered adequate and the cost of purchasing water was included in the MEB, some Syrian families had to rent substandard accommodation in which water was not available (key informant interview with former ECHO staff).
- MPC is usually implemented in contexts where hygiene practices (linked to awareness and use) are considered acceptable (i.e., it is assumed that beneficiaries will purchase soap, sanitary pads etc. if needed and will use these items appropriately); therefore monitoring has not focused on the use of these hygiene items, but rather on their purchase, with use being an assumed consequence of access. This is a key difference between MPC and more sector-specific approaches to CVA (such as vouchers for hygiene items, or in-kind distributions of hygiene items) which are sometimes implemented due to an assumption that beneficiaries will otherwise not purchase and use these items. It should be noted that this review did not find any research which tested these assumptions – i.e., by comparing the use of WASH goods and services accessed through

Evidence map 5. *Effect of MPC modality on wash outcomes*



How to read the evidence map

- The blue circle **'water availability; 2'** means that only two pieces of evidence reviewed measured the effect of MPC on '**water availability**'. The strength of the evidence of the effect of MPC on '**water availability**' is very low, and there is no evidence of a positive effect of MPC on this outcome (~0 per cent positive effect).
- The purple circle **'sanitation access; 3'** means that only three pieces of evidence reviewed measured the effect of MPC on **'sanitation access'**. The strength of the evidence of the effect of MPC on **'sanitation access'** is low, and there is some evidence of positive effect of MPC on this outcome (~66 per cent – or two out of the three pieces of evidence – showed a positive effect).
- The green circle **'hygiene access; 8'** means that eight pieces of evidence reviewed measured the effect of MPC on **'hygiene access'** (the size of the circle is proportional to the number of studies). The strength of the evidence of the effect of MPC on **'hygiene access'** is medium. The effect of MPC on this outcome is positive (~100 per cent of the evidence showed a positive effect).

vouchers or in-kind distributions, as opposed to by MPC, in a humanitarian context.

- In summary, while there has been little measurement of the effect of MPC on WASH outcomes other than (financial) access to goods and services, it is important to build the evidence base of the effect of MPC on higher-level outcomes such as quality and use of water or sanitation, or WASH-related health. While the vast range of possible effects of MPC – specific to the needs of each household – are difficult to adequately capture through monitoring, especially by a single team often not specialized in WASH, for the WASH sector it is essential to understand not only how the cash is spent but whether households are able to use WASH goods and services safely. The MPC modality is generally part of a wider humanitarian response which also addresses other WASH barriers, and higher-level outcomes could be monitored for the humanitarian response as a whole, across sectors (though in practice this is complex, and no documented examples were reviewed for this study).

4.6 Note on evidence of the effect of MBP on the sanitation subsector

The sanitation-related evidence used to produce the above maps mostly concerns excreta management. A few pieces of evidence were also reviewed regarding other sanitation subsectors, and they are analysed separately below.

Solid waste management

Only two documents were selected for the evidence review, though six documented MBP practices for solid waste management were identified for the practice review, including CFW for digging community waste disposal pits, setting up private solid waste management systems in camps or urban areas, waste separation and recycling systems. The two interventions selected for the evidence review were:

- a cleaning campaign through CFW in Haiti, earthquake response (Oxfam, 2011)
- a cleaning campaign through CFW in Kenya, drought response (Schira, 2011).

The evidence indicated that neither of these interventions had a significant effect on solid waste outcomes; although sites were cleaner after the campaign, they quickly became full of rubbish again. Overall, the review therefore found that the strength of evidence of the effect of MBP on solid waste is negligible. Further details about MBP practices for solid waste management can be found in Annex 12.

Vector control

Three interventions using market-based modalities for vector control were included in the practice review, all of them high-quality pieces of research comparing different market- and non-market-based approaches to increase the uptake of mosquito nets. However, as these studies were implemented in development contexts, the screening process excluded them from the evidence review and mapping presented here. The evidence of the effect of MBP on vector control in emergency contexts is therefore considered negligible. Conclusions from these studies are nevertheless summarized in the 'MBP for hygiene' practice report, as lessons learned can potentially be applied to improve MBP in humanitarian response.

4.7 Note on evidence of the effect of MBP on WASH-related health

In general, there is a lack of high-quality evidence of the health impacts of WASH interventions in emergency contexts (Yates, et al., 2017b). The same observation can be made for WASH interventions that use market-based modalities. The evidence of WASH market-based modalities having a positive effect on health indicators (such as reduction in morbidity and mortality rates as a result of WASH-related diseases) in emergency contexts ranged from very low (water supply) to negligible (HHWT, sanitation and hygiene). Only four relevant studies were found; one study showed the positive

effect of market support on WASH-related health, while three pieces of evidence showed CVA modalities to have no effect on WASH-related health, as detailed below.

- In terms of market support, the proportion of households in Syria with childhood diarrhoea declined from 32.8 per cent to 20.4 per cent over a two-year period during which water safety planning programming was implemented. The water safety planning approach included risk analysis, market analysis and market support modalities.[14] The combination of market support modalities was considered to have a positive effect on water quality and WASH-related health (Sikder, et al., 2017).
- In terms of CVA, a systematic review of 'Cash Plus'[15] interventions by UNICEF identified the limits of CVA to address structural WASH-related barriers, citing evidence from Ethiopia where nutrition and hygiene practices for children were severely hampered by the lack of clean drinking water as a result of the drought. In this context, despite the MPC received by households, there was still a lack of drinking water (Roelen, et al., 2017). The effect of CVA on WASH-related health outcomes was considered to be neutral in this case.
- In Lebanon, households receiving MPC "spent significantly more on water" than those households not receiving MPC. However, there was no difference in the number of sick days (health indicator), suggesting that the cash amount was not large enough (or provided over a long enough time frame) to generate substantial health improvements (Lehmann and Masterson, 2014).
- In DRC, multisectoral vouchers (including for hygiene items) showed no effect on WASH-related health, using the indicator of children's physical health (Quattrochi, et al., 2019).

In addition to the above, there was evidence of health-related expenditure of CVA – e.g., households using cash to pay for medical bills incurred as a result of unclean water (Sloane, 2014) – and evidence of CVA having a positive effect on adult mental health (Quattrochi, et al., 2019). These effects on health-related indicators were, however, not included in the evidence maps, as they were not linked to WASH-related causal pathways.

4.8 Note on evidence of the effect of MBP on WASH market resilience

'Resilience' refers to the ability of a system to anticipate, absorb, accommodate or recover from shocks and stresses (Diep, et al., 2017). One of the expected benefits of MBP for WASH is the positive effect it can have on the resilience of local WASH markets to shock (GWC, 2019), and this study sought to assess whether there is evidence of this causal effect.

A simple approach to measuring market resilience is to use the 'availability' outcome as the main proxy indicator of market resilience. The 'availability' outcome defined in this study measures the effects of interventions on local WASH markets and includes a wide range of concepts and indicators (effect on prices, infrastructure, stock, capacity of market actors, their profits and level of preparedness etc.), all of which can be considered to contribute to market resilience. Emerging evidence suggests a positive effect of market support modalities on water and hygiene availability, although the strength of evidence is low (Diep, et al., 2017; Sikder, et al., 2018).[16] Using this model of 'availability' as a proxy

14 In the case of southern Syria, implementation of water safety planning involved conducting a risk assessment at three levels (household, trucked water system, and piped network system), followed by implementation of appropriate risk management measures, including chlorination training, distribution of chlorine and chlorine testing equipment, installation of chlorination stations at the water collection wells, household and community-based water safety awareness campaigns, as well as fixing water lines and pumps of the supply network (Sikder, et al., 2017). For the purposes of this analysis, water safety planning is considered a form of MBP, as it works through existing markets to provide safe water.

15 Watson and Palermo refer to 'cash plus' programmes as "combining cash transfers with other sorts of support. The rationale is that cash alone is not always sufficient as a means to reduce the broad-based and interrelated social and economic risks and vulnerabilities that the targeted beneficiary populations face, and that additional support is needed" (cited in Roelen, et al., 2017, pp. 5–6).

16 For example, in Yemen, UNICEF initiated and supported the development of an emergency preparedness and response (EPR) unit within the offices of the local water utility. During the 2011–2012 crisis, the EPR unit team restored water supply services to 140 000 people (UNICEF, 2017f, cited in Diep, et al., 2017). See also Table 1 for a summary of emerging evidence.

for resilience, it could be concluded that market support can contribute positively to water and hygiene market resilience.

However, this approach to measuring market resilience is limited, since it does not fully capture other aspects, such as demand and sustainability. Market resilience goes beyond 'supply', as markets depend also on sustained demand, both during and outside times of crisis. Demand is in turn dependent on households' economic resilience, variability in income, coping strategies etc., which are subject to wider economic factors. A comprehensive measurement of market resilience would ideally involve a composite indicator calculated from availability, access, quality and use indicators. Development of such a model was beyond the scope of this study. It is therefore not possible to draw conclusions in this report concerning the effect of market-based modalities for WASH on market resilience.

Three of the pieces of evidence reviewed included some measurement of the impact of MBP on WASH market resilience, each using slightly different interpretations of the term. These documents describe the positive effect of market-based modalities on market resilience or argue that the increased use of MBP would further contribute to building market resilience.

- 'Water, crises and conflict in MENA: how can water service providers improve their resilience?' describes how organizations such as Oxfam, ICRC and UNICEF have successfully built the resilience of the water supply system in MENA, investing in desalination plants, building internal capacity of government agencies and staff to operate facilities independently, decentralizing spare parts and consumable stocks etc. (Diep, et al., 2017).
- 'Stimulating resilience for recovery: building adaptive resilience in emergency WASH response in Haiti, the Philippines and Lebanon' highlights that agencies are more focused on responding to immediate needs than building the resilience of populations to better manage future crises and events (King, et al., 2014).
- 'Effectiveness, Scale and Sustainability in WASH Programmes – A Review' puts forward the argument that emergency interventions should include an exit strategy in their design from the start, suggesting looking to the private sector to transition from humanitarian assistance to longer-term approaches. For instance, unless water supply systems in refugee camps plan a cost recovery system or are designed according to development standards, it is very complex to involve private companies when humanitarian agencies withdraw (Taylor, 2013).

WASH Cluster
Water Sanitation Hygiene

Evidence-building for cash and markets for WASH in emergencies
MBP for WASH Evidence Mapping

5.CONCLUSIONS AND RECOMMENDATIONS

The study found that the overall strength of evidence of the effect of MBP on WASH in emergency contexts was low, with some variations between modalities (market support, CVA), subsectors (water, sanitation and hygiene) and outcomes (availability, access, quality, awareness, use and WASH-related health). The impact of MBP on WASH market resilience was excluded from the evidence map, as the level of evidence found was negligible.

The following sections present the emerging evidence identified during the study, the gaps in evidence that were observed, including recommendations to address these gaps, and key research areas to be explored.

Emerging evidence

Although the level of evidence is often too low to draw robust conclusions, some emerging evidence of the effect of MBP on WASH outcomes in emergencies was identified, and is summarized in Table 1, where emerging evidence of a positive effect is indicated with a '+'.[17] The most prominent findings drawn from the evidence are listed after the table, as per the letter indicated in the cell.

Table 1. *Emerging evidence of positive effects of MBP on WASH outcomes in emergency contexts*

MODALITY	SUBSECTOR	OUTCOMES				
		AVAILABILITY	ACCESS	QUALITY	USE	HEALTH
CVA modalities	Water		**+(c)**			
	Sanitation		**+(c)**	**+(e)**		
	Hygiene	**+(a)**	**+(c)**			
Market support modalities	Water	**+(b)**	**+(d)**			
	Sanitation					
	Hygiene	**+(a)**	**+(d)**	**+(a)**		

Legend

+(x) *Emerging evidence of positive effect (see example 'X' below)*

Not enough evidence to draw conclusions

17 'Emerging evidence' was defined as evidence for which strength is either 'medium' or 'low', while 'very low' and 'negligible' evidence was not included in the table. Evidence of positive effect was defined as over 75 per cent of evidence showing a positive effect. Evidence of neutral or negative effect was also observed, but with a negligible level of evidence, and thus was not represented in the table. As previously stated, some of these market-based modalities were implemented in combination with other non-market-based modalities, such as BCC and direct service delivery. In these cases, effect for the whole intervention was noted, as from the data available it was not possible to isolate the effect of each modality.

Prominent findings from the evidence review

a. The use of CVA modalities such as vouchers, or market support modalities such as social marketing for hygiene during emergencies or fragile contexts, has been found, in some instances, to improve indicators of availability for hygiene items, such as vendors' satisfaction and profit, as well as the quality of the hygiene products accessed by beneficiaries.

b. Market support modalities such as supporting private or public water market actors during emergency preparedness or response phases have been found to have a positive effect on water availability indicators, resulting in an improved capacity of local water market actors and infrastructure such as water kiosks or water utilities.

c. CVA has been found to have a positive effect on financial access to most WASH goods and services; beneficiaries effectively accessed water, latrines and hygiene items through cash or vouchers during emergencies.

d. Supporting market actors such as water utilities or hygiene vendors has, in some cases, improved physical access to WASH by improving the availability of water and hygiene items near the beneficiaries during and after emergencies.

e. Certain CVA modalities have had a positive effect on quality indicators for sanitation, such as vouchers or conditional (tranche) payments for latrine construction in the recovery phase, and vouchers for latrine desludging services.

Evidence gaps

Despite the emerging evidence, the evidence maps developed for each of the WASH subsectors highlighted considerable gaps in the evidence base, due to a lack of both MBP for WASH practices and of measuring the effects of these interventions. The main gaps in evidence, as well as recommendations to address these gaps, are summarized in Table 2.

Table 2. *Main evidence gaps related to MBP for WASH in emergency contexts*

GAP	COMMENT	RECOMMENDATIONS
The level of evidence of MBP for WASH used in *the first three months following a sudden-onset crisis* is negligible.	*Although a significant number of market-based modalities for WASH were implemented during emergency preparedness or recovery over the last decade, almost none were implemented during the first phase of a rapid-onset emergency response, leading to an absence of evidence for this phase.*	*Prepare and pilot WASH interventions which include market-based modalities during the first three months of a response to a rapid-onset emergency, monitor and evaluate results, and produce lessons-learned documents to contribute to the evidence base.*
There is no evidence that MBP is more *cost-efficient* than direct service delivery.	*Cost-efficiency comparisons between CVA and in-kind modalities have been conducted in other sectors. No studies comparing CVA or market support with other modalities during emergencies were identified for the WASH sector.*	*Conduct studies comparing the cost-efficiency of market-based modalities versus direct service delivery during emergencies.*

GAP	COMMENT	RECOMMENDATIONS
The added value of WASH *complementary programming* (integrating CVA, market support and non-market-based modalities) on WASH outcomes has not yet been studied adequately.	*It is reasonable to assume that to address all barriers to achieving WASH outcomes (availability, access, use etc.) in humanitarian contexts, several market-based and non-market-based modalities are needed. Some interventions combining modalities and measuring effect on WASH outcomes were reviewed, but in general their design and monitoring system were weak. The contribution of each modality to the overall effect is also unknown. MPC is an area for which complementary approaches are key for WASH, and where gaps in practice and evidence are important.*	*Conduct qualitative and rigorous research on WASH complementary programming to better understand the causal pathways that lead to these observed effects, and establish statistical correlation between modalities and observed effects. A priority would be to measure the added value of combining MPC with other WASH-specific modalities such as WASH market support, labelled cash/vouchers/ in-kind distribution for WASH items or services that are unlikely to be prioritized by beneficiaries or not included in the MEB (such as menstruation hygiene management items or latrine construction material and labour).*
There is a negligible to very low level of evidence of the effect of *market support modalities* on WASH quality* and use outcomes.	*Market support modalities aim to reach beneficiaries indirectly via the market. The effect of market support on WASH quality and use outcomes for beneficiaries therefore takes longer to achieve and is more complex to measure, especially during emergencies.*	*Ensure more systematic monitoring of higher-level WASH outcomes (including quality and use) when using WASH market support modalities during emergencies.*
There is a negligible to very low level of evidence of the effect of *CVA modalities* on WASH quality** and use outcomes, including for MPC.	*Interventions including CVA modalities rarely monitor quality and use, and teams implementing CVA modalities often lack WASH expertise to do so. Causal frameworks suggest that CVA modalities should be integrated with BCC or direct service delivery to reach WASH outcomes, although there is as yet no evidence to support this.*	*Advocate for more systematic monitoring of higher-level WASH outcomes (quality, use) when using CVA modalities (including for MPC). Ensure that interventions that include multisectoral CVA modalities (including MPC) are appropriately designed to achieve and monitor WASH quality and use outcomes.*
There is a very low level of evidence of the effects of *sanitation market support* on WASH outcomes in emergencies.	*Sanitation markets are often considered too weak, demand too low, and cost of sanitation infrastructure too high to rely on local markets to deliver in emergencies. There is nevertheless good evidence of sanitation market support modalities having a positive effect in development contexts (microfinance, sanitation marketing, latrine subsidies), with possible replication or adaptation for preparedness, recovery and protracted crises.*	*Pilot interventions using sanitation market support modalities in humanitarian contexts, with a focus on preparedness and resilience (refer to the report on MBP for sanitation practices for examples, and details on feasibility), monitor and evaluate results, and produce lessons-learned documents to contribute to the evidence base.*
There is a negligible to very low level of evidence of the effect of *MBP on HHWT* in emergencies.	*Most of the evidence reviewed of CVA/market support for HHWT was related to development contexts and screened out of the final evidence map. The little evidence that exists from emergency contexts does not show a significant positive effect on WASH outcomes. However, MBP for HHWT in general gives good results in development contexts – e.g., through a combination of marketing and vouchers to subsidize HHWT purchase.*	*Pilot interventions using HHWT market support modalities in humanitarian contexts, with a focus on preparedness and resilience (refer to the report on MBP for water practices for examples of practices, and details on feasibility), monitor and evaluate results, and produce lessons-learned documents to contribute to the evidence base.*
There is a negligible to very low level of evidence of the effect of *MBP on WASH-related health* outcomes.	*There is a lack of evidence of the effect of market-based modalities, for all WASH subsectors, on health outcomes. The few rigorous MPC studies reviewed measured a neutral effect on WASH-related illness.*	*Conduct rigorous studies assessing the effect of market-based modalities for WASH (particularly market support) on health outcomes, as well as the causal pathways to achieving these outcomes.*

* Except for hygiene, for which the level of evidence of effect of market support on quality is slightly higher (a significant number of interventions reviewed included support to hygiene vendors).
** Except for sanitation, for which the level of evidence of effect of CVA on quality is slightly higher and the effect positive (a significant number of interventions reviewed included tranche payments for latrines or vouchers for latrine construction material).

GWC partners and academic institutions should play a key role in addressing some of the above-mentioned gaps, through the implementation of rigorous research projects during emergency response. Following the validation workshop for this study, which was held in July 2020, members of the GWC Markets Technical Working Group have agreed to prioritize four research areas, which are detailed below.

1. What is the added value of emergency WASH interventions which use market-based modalities, as compared to interventions which use only direct service delivery?

A wide variety of market-based modalities can be used for WASH in emergencies, and choosing the most appropriate modalities should be based on the recommendations of a market assessment and response analysis. These modalities can be used separately or in combination with other modalities, including non-market-based modalities when relevant. Research can be conducted to measure the efficiency, effectiveness and impact of several types of interventions which use market-based modalities, across a wide variety of contexts. When possible and relevant, results can be compared to interventions which do not use any market-based modalities. Table 1 can be used to focus operational research on themes where evidence is missing (e.g., the effect of CVA on water availability, quality, use and health-related indicators), and current needs and MBP feasibility in the area targeted by the research.

2. To what extent do preparedness efforts affect the feasibility of market-based modalities during the first three months of a rapid-onset emergency response, and, if market-based modalities are used, how do these preparedness activities contribute to achieving humanitarian WASH outcomes?

To improve the emergency response, agencies and sectors should implement preparedness activities, both at institutional level (policy, procedures, capacity etc.) and at programmatic level (e.g., mapping and supporting WASH market actors, financial service providers, public institutions etc.). These preparedness actions are likely to have a positive effect on the feasibility of using market-based modalities in the aftermath of an emergency, as well as a positive effect on WASH outcomes and impact. These feasibility factors and effects can be evaluated across a wide variety of contexts, and, when possible and relevant, can be compared to situations where such preparedness efforts were not conducted.

3. For humanitarian WASH outcomes, what is the added value of combining MPC with other WASH-specific modalities (such as hygiene BCC or WASH market support), as compared to interventions which use MPC alone?

MPC is a modality that is widely used today, although the involvement of the WASH sector in the design, implementation and monitoring of MPC is often limited. As MPC enables beneficiaries to prioritize and choose how they spend their cash assistance, the use of WASH BCC and community engagement is crucial to guide people to make relevant choices to mitigate public health risks, while ensuring their well-being, dignity and safety. While MPC is being used, local WASH markets can also be supported to offer better-quality and more attractive goods and services that beneficiaries can access with the cash received. Research could be conducted to study the effect of MPC on WASH outcomes when these WASH-specific components are used, and results compared to situations when these components are not used.

4. What are the most effective ways of engaging with markets before, during and after emergencies to ensure adequate linkages between humanitarian interventions and long-term development approaches?

Market-based approaches (particularly supply-focused market support interventions, and demand-focused subsidies or CVA interventions coupled

with BCC and community engagement) offer, in theory, opportunities to ensure more sustainable WASH outcomes that would continue beyond the end of a particular response or intervention. This assumption requires a broader examination of (but not limited to) the willingness and affordability to pay, appropriate finance and management models, systems engagement in both the demand and supply side, behaviour change and communication, and understanding of the drivers, incentives and blockers to achieve more sustainable WASH outcomes from the outset.

This research could, for example, explore the targeting of households, communities and/or market actors with the provision of financial support through different routes (public finance, subsidies to private market actors, WASH-specific vouchers or MPC), and determine which is most effective in reaching WASH outcomes, and under which circumstances. This research should not be limited to CVA only, as it intends to provide a holistic opportunity to understand the effectiveness of market-based interventions across sectors, while transitioning from humanitarian to development and supporting the sustainability of WASH outcomes.

WASH Cluster
Water Sanitation Hygiene

Evidence-building for cash and markets for WASH in emergencies
MBP for WASH Evidence Mapping

Cluster Advocacy and Support Team
Global WASH Cluster

UNICEF
4 route des Morillons
CH-1211 Geneva Switzerland
https://washcluster.net

For more information, please contact the GWC helpdesk:
globalwashcluster@gmail.com

WASH Cluster
Water Sanitation Hygiene