MONITORING AND EVALUATION FRAMEWORK

for WASH Market-Based Humanitarian Programming

GUIDANCE DOCUMENT

OXFAM

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FOR WASH MARKET-BASED HUMANITARIAN PROGRAMMING

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CONTENTS

DEFINITIONS OF KEY TERMS AND ABBREVIATIONS

Activities	Actions taken or work performed through which inputs, such as funds, technical assistance and other types of resources are mobilized to produce specific outputs (OECD, 2010).
Cash transfer programming (CTP)	All programs where cash (or vouchers) is directly provided to beneficiaries (individual's, household or community recipients; but not to governments or other state actors). It excludes remittances and microfinance in humanitarian interventions (CaLP, 2011).
Commodity	A marketable item – either a good or service – supplied to meet needs / demands
Critical market	A market that has a significant role in ensuring the survival and/or protecting livelihoods of the target population.
Effectiveness	Relates to the degree to which the given outputs are successful in producing the desired WASH goals (e.g. increased availability and affordability of WASH goods and service, improved market resilience to changes)
Essential/critical WASH goods and services	In this document, we refer to essential/critical WASH goods and services as a set of WASH goods and services that are defined by the programme design. For the purpose of measurement, "critical/essential WASH goods and services" can be whole set, or a subset of those focused on by the programme
Efficiency	Relates to how well inputs are converted into outputs of interest. In this framework only cost-efficiency is considered as the ratio between the value of goods and service obtained by the beneficiary to the overall cost.of the programme which enabled its delivery.
Funding	Funding is the act of providing financial resources, usually in the form of money or other values such as effort or time, to finance a need, program, or a project.
Household	The people who share the same: a) housing unit or shelter for sleeping, b) main meals or c) service contractor. These people may or may not be related.
Inclusion bias	Is related to sampling bias – whether there were any people included in the programme who should not have been included, or were any people excluded who should have been included.
Intervention	Refers to post-disaster responses in affected communities undertaken by external organizations (e.g. international, national, or sub-national organizations, including governments) i.e. actions not taken by the community themselves.
Market	Any formal or informal structure (not necessarily a physical place) in which buyers and sellers exchange goods, labour or services for cash or other commodities.
Market-based Programming (MPB)	A range of programme modalities that are based on understanding and supporting market systems local to the affected population (Global WASH Cluster, 2016).

Market Facilitation	Market facilitation is a type of market intervention or action, which works to stimulate markets while remaining outside of the market themselves. This approach targets relationships, ownership, incentives and exit strategy.
Market system	A network of market actors, supported by various forms of infrastructure and services, interacting within the context of rules and norms that determine how a particular commodity is produced, accessed, and exchanged. Market systems function at one or more levels—local, national, regional, and global. They can be formal and informal, and often are a mixture of both.
Outcomes	The direct effects of the project which will be obtained at medium term and which focus on the observable changes in behaviour, performance, relationships, policies and practices.
Outputs	The direct and early results of an intervention activities. Outputs refer to the most immediate sets of accomplishments necessary to produce outcomes and impacts.
Primary data collection	Data collected during the programme as a part of programme activities, or specifically for the task at hand.
Recall Bias	Systematic error introduced in e.g. a survey, because surveyees are unable to accurately recall the measure of interest. Very often such errors are introduced when one asks for recalling common events beyond 2 weeks in the past.
Secondary data collection	Data collected by other organisations that might be of use for the programme. Often found in various documents (reports, evaluations or project documentation)

1 INTRODUCTION

1.1 BACKGROUND

Engaging with and supporting markets and its actors is increasingly recognised as a key part of humanitarian programming as market actors are well positioned to provide services and distribute commodities to affected communities. There are a diverse range of humanitarian interventions which are informed by and/or integrate markets. One of them is cash transfer programming, which is increasingly utilised to assist communities' access to critical goods and services during and after an emergency.

There are ongoing discussions as to on what constitutes successful market based programming in WASH sector. A major constraint to widespread acceptance and uptake is the lack of evidence to prove that it is as- or more effective than traditional approaches in meeting programme delivery outcomes. But there remain major challenges to overcome this constraint related to:

1 A lack of a consistent logic model to frame monitoring and evaluation for a variety of different programmes that incorporate market based programing;

2 Timing challenges in acquiring data to prove programme outcomes are being met (particularly if the indicators need to be monitored post - activity e.g. 6 months to a year after the programme is implemented);

3 Lag time between programme development and delivery;

4 Lack of methodology to support comparative analysis between traditional and market-based programmes.

Thus, the WASH sector needs to progress and make a step change in how it measures the indirect and direct consequences of market-based programming. Other sectors, such as food and shelter, often use different market-based modalities in their responses, but these sectors also lack a systematic approach to assess the short and long term effects on the market related to functionality, access, and economic rehabilitation etc.

1.2 PURPOSE AND OBJECTIVES

Monitoring, evaluation, accountability and learning is identified as a gap by the Global WaSH Cluster's technical working group in WASH markets (Global WASH Cluster, 2016). Currently, the emergent use of market-based approaches in WASH programmes requires that each agency drafts their own monitoring and evaluation (M&E) framework.

To better support new WASH market-based programmes, Oxfam GB commissioned the development of a generic M&E framework and associated ICT tool for the WASH sector, which can be adapted to the different local contexts. This should help programmes to improve their monitoring and evaluation requirements and build the evidence-base for market-based approaches.

The main objectives of the M&E framework are to:

1 Monitor efficiency and effectiveness of involvement of market and various market actors in critical/ essential WASH goods and services delivery to affected communities.

2 Evaluate effects associated with WASH market rehabilitation.

3 Assess gender imbalances and access to WASH markets for poor and vulnerable groups.

4 Analyse overall performance (in terms of costs, benefits and quality) of market responses compared with traditional responses.

1.3 ASSUMPTIONS

The main assumptions of the Generic Monitoring and Evaluation framework are:

- Limited or no information is collected before the crisis, but where such information is available it should be used as the baseline for the monitoring
- Programme/project design articulates its logic, objectives, outputs and outcomes.
- We assume that minimum accounting and finance books are available from supported traders and service providers as such a minimal administration will help traders to sustain their trade under different conditions.
- For the purpose of measurement, we define households (see sections: Definition of key terms and Section 3.2) as a basic measurement unit. However, if local context do not allow identification of households as defined in this framework (for example in case of collective centers accommodation), the minimum measurement unit might be the beneficiary (a person).

We also assume that staff charged with the responsibility to undertaken the monitoring activities will have the following skills:

- Experience in field work and assessments;
- Ability to break down and rephrase complex questions;
- Ability to adapt the language to the interviewee (i.e. adapting to the cultural and socio-economic background of the interviewee);
- Ability to collect information using different tools;
- Language skills;(i.e. local language and common language to communicate between team members);
- Basic numeracy and analytical skills;
- Basic analytical skills for the analysis of the market price data,
- Good knowledge of the affected area, inhabitants, key informants, relevant secondary data and markets, as well as project main objectives.

1.4 AUDIENCE AND FORMAT

Audience: The intended audience of this document are WASH practitioners, MEAL advisors and managers, donors, programme and WASH cluster coordinators, market specialists and other professionals with an interest in monitoring and evaluation or in market-based programming.

The format of this document is presented in two main sections:

- **Section 1: Generic M&E framework**
  Presents generic logical framework and generic indicators related to it, and briefly explains method of measurements for the quick reader,
- **Section 2: Annexes**
  Provide more information and context for practitioners who wish to read, and understand more:
  - Annex 1 presents generic indicators in more detail.
  - Annex 2 provides an overview of the survey questions in relation to generic indicators.
  - Annex 3 describes methods of measurement.
  - Annex 4 provides additional guidance for survey design

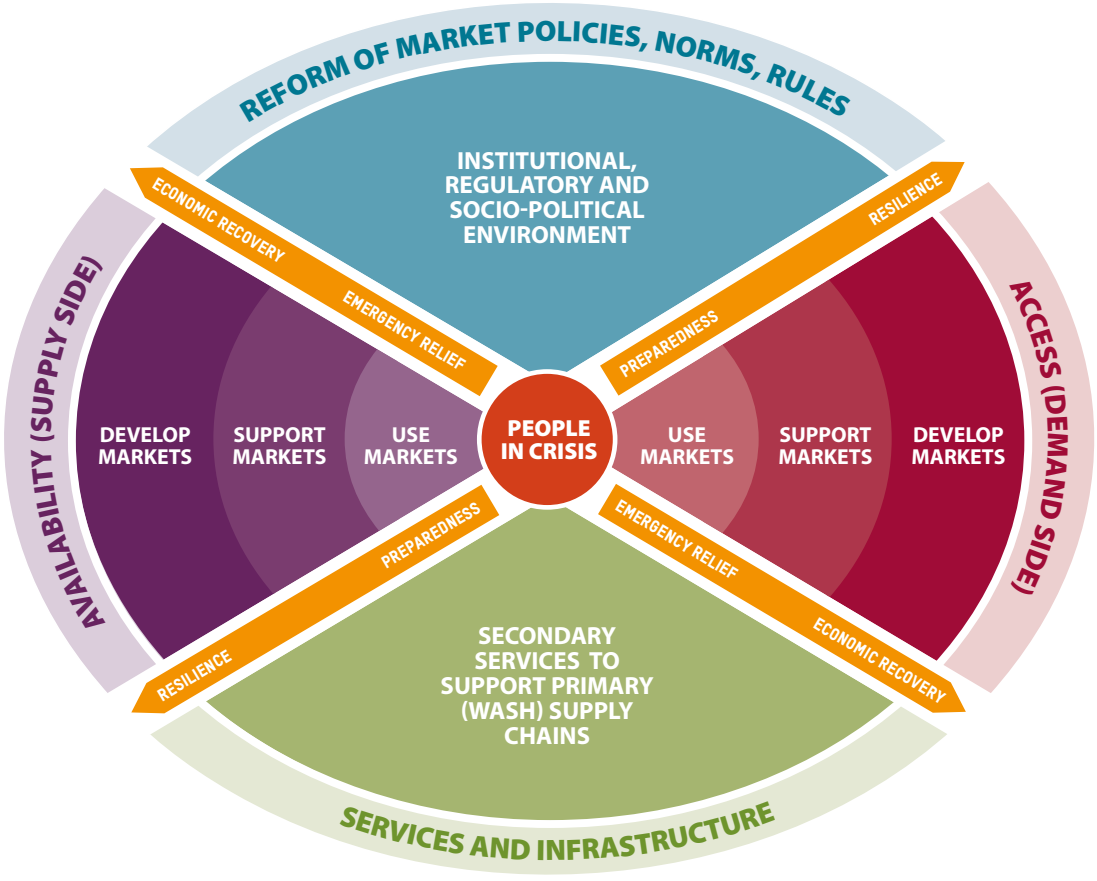
The M&E Framework and associated ICT tools should be ideally used together. To facilitate this process, user guidance for the ICT tool were also developed and can be found at:
www.emma-toolkit.org/sites/default/files/bundle/0xfam%20ICT%20Guidelines.pdf.

2 WASH MARKET-BASED APPROACH LOGICAL FRAMEWORK AND MODEL

A logic flow model has been drafted to make a relation between MBP goals and activities in WASH more explicit. By assuming that demand for WASH goods and services is required and needs to be stimulated, we identified and addressed two areas of market-based programming in WASH: 1) Supply / Availability and 2) Service / Infrastructure (see Figure 1). Other assumptions related to logic-flow model are:

- Market actors have financial, physical and social access to markets,
- Households typically use markets to access what they need,
- If lacking, willingness to pay needs to be stimulated (if satisfactory service level exist),
- Capacity to pay exist or is supported by the programme (if supply is rehabilitated, people can afford to buy goods and services),
- Informal / tacit context-specific social norms and activities need to be considered (project – related), and
- Sphere standards[1] are known and accepted by all actors in crisis.

Figure 1: The generic framework addresses 'Availability' (right), 'Market support' (bottom) and 'Demand' (left) side of the MBP framework[2]



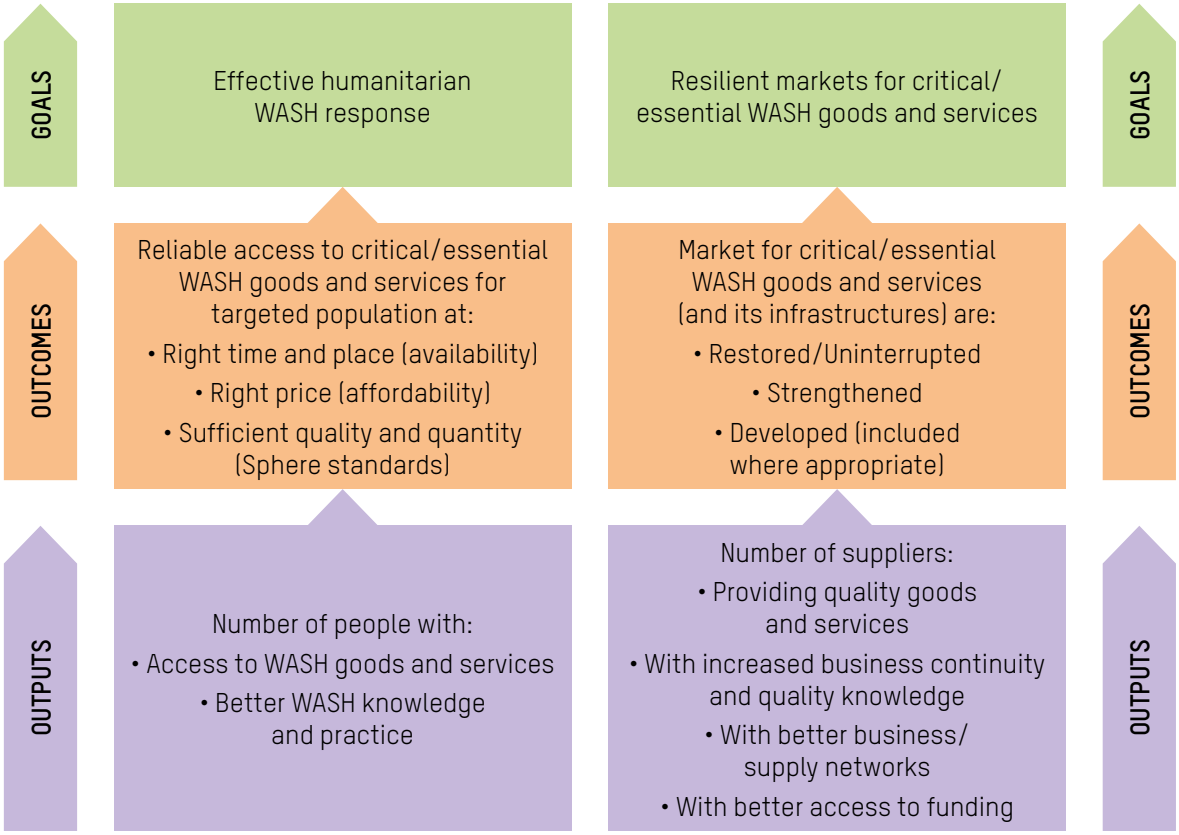
[1] www.spherehandbook.org/en/wash-standard-1-wash-programme-design-and-implementation

[2] Market Based Programming Framework, Market in Crisis, 2017

Figure 2 presents the logic-flow model for WASH market-based programming. The logic-flow model has been developed based on inputs and feedback from Oxfam WASH staff, CaLP Monitoring Workshop (London, October 2016), and a literature review (focusing at the monitoring and evaluation of cash transfer and market-based programmes).

The logic-flow model relates to essential/critical WASH goods and services as a main component of humanitarian response intervention. It is applicable to all types of MBP modality (market use, support or development) applied during the project cycle: traditional (such as in-kind), as well as cash transfer related modalities.

Figure 2: Logic-flow Model for Oxfam WASH Market-based Programming



2.1 KEY QUESTIONS

In the literature, cash transfer programming (CTP) is far better documented than the more overarching topic of market based programming, which covers supply as well as demand sides of the market system .The same focus can be found back in relation to the monitoring of market based approaches. When MBP is mentioned, it is usually to indicate the complexity of monitoring such an approach, illustrating a wide range of issues which needs addressing. These issues include timeliness, intervention appropriateness, achieved coverage among the targeted population, quality and flexibility of intervention, efficiency and effectiveness of across different MBP modalities (Oxfam,2016). Even more important are the comparison with approaches which do not rely on support of local markets, such as the traditional distributions of goods often used in emergencies.

For this generic M&E framework, we focus on indicators, methods and tools needed for answering next key questions:

- Does market-based program ensure equitable distribution and access to services that meets the needs and preferences of all members of the disaster-affected population?
- Does the market analysis and programming approach provide benefits in terms of effectiveness and efficiency of humanitarian responses in emergencies?
- Does market-informed approach contribute towards market system preparedness, recovery and resilience?

2.2 APPLYING THE FRAMEWORK

This framework provides a minimum set of indicators, and being a generic one, it is not intended to address specific response outputs and outcomes in various countries.
If conducted properly, it should however, allow systematic data collection, analysis and aggregation across different projects and programmes in order to estimate their efficiency and effectiveness.

Given the wide variety of contexts and programmatic interventions, it is expected that it will require modification / adaptation, but the generic framework provides a minimal set of indicators as a basis for practitioners to develop a programme specific monitoring framework.

Table 3 shows that indicators are relevant in a variety of situations.

There are three possible scenarios related to market-based humanitarian programming:

1 Pre-crisis market based strengthening and/or risk reduction activities are undertaken, but no response to crisis,

2 Pre-crisis market strengthening activities inform the response delivery, and

3 No pre-crisis activities are undertaken, but emergency market-based WASH response has been delivered.

To be as universally applicable, this generic framework is based predominantly on scenario 3 but can be applied in scenarios 1 and 2 as it benefits from pre-crisis market evaluations.

In addition, levels of market engagement can vary across programmes, from market use, market support to market development[3] (as presented in Table 1).

- **Use of markets** – a response activity which works through markets to provide relief and basic services to the targeted crisis affected population.
- **Support markets** – a response activity to rehabilitate or strengthen market systems to enable market actors to recovery after a shock, either through temporary or one-off actions.
- **Develop markets** – a longer-term approach that aims to expand the reach of existing markers to unserved areas or to introduce new commodities to improve access and/or improve quality.

[3] "Using Market Analysis to Support Sustainable and Resilient WASH in Crisis-prone Areas", 2017 WEDC workshop on MBP for emergencies (Loughborough, July 2017)

Table 1: Examples of Market Based Programming

	Level of market engagement		
	Use	**Support**	**Develop**
Supply	Contracts/framework agreements with existing suppliers	Grants for rehabilitation of damaged infrastructure	Investment in new supply chains
Demand	Cash transfer or vouchers programmes	Increase demand for existing products/services	Marketing of new products to better meet household needs/demands

This framework touches on all aspects of intervention. However, some of the indicators might become redundant if a programme does not cover all aspects as listed in Table 1. More details are presented in Table 3 in Section 3.2.

2.3 RELATION TO RELEVANT FRAMEWORKS IN HUMANITARIAN SECTOR

As illustrated in Figure 2, the ***ultimate goal of MBP interventions for the WASH sector is the effective provision of WASH goods and services in an efficient way to the targeted population by strengthened local WASH markets***.

Among different deliberated frameworks, we distinguish (and focus on) several, which we found the most significant for development of WASH MBP Generic Monitoring Framework. Most of the literature reviewed for this document deals with programme and project evaluations (as shown in Table 2). MBP covers such a wide variety of activities and possible outcomes that, covering all of these for the purpose of programme evaluation can become very demanding in terms of time and resources, not just during response delivery but potentially prior to (early warning system monitoring) and post response (post programme evaluations).

Assessing change necessitates identifying what the situation was like for households at different times listed below. Since the activities of an individual agency, and effects of these activities, will not occur in isolation but rather in a complex response, it becomes extremely difficult to identify what specific changes have resulted from a specific agency's intervention. Within the framework we aim, thus, to estimate the relative importance (or contribution) of the intervention to people's and market's recovery. In doing so, the framework embraces the 'Contribution to Change' principle (Few et al, 2014) that ***changes in people's well-being can be identified at a household level***.

Table 2: An overview of proposed criteria for this M&E framework in comparison with other humanitarian quality frameworks[4]

Identified M&E criteria for MBP in WASH	Criteria Description	Relevant humanitarian frameworks				
		OECD-DAC criteria	Core Humanitarian Standards	DfID Value for Money (VfM) Components	MERS standards[4]	Evolved Oxfam's Global Humanitarian Indicator Tool Benchmarks
Relevance / Appropriateness	• Adequate needs assessment, addressing different needs of all social and vulnerable groups • Good understanding of demand and supply for critical/essential WASH goods and services through market and risk assessment as well as mitigation strategies	Relevance & Appropriateness	1. Appropriate and relevant 4. Based on communication, participation and feedback 5. Complaints are welcomed and addressed.		Do No Harm Scope	1. Relevance 7. Accountability to affected people, strategy and plan being implemented 11. Programme addresses specific concerns and needs of vulnerable groups 16. Programme is coordinated with and complementary to the response of other humanitarian actors

Coverage, quality and flexibility	• Extent of which programme meet the needs of the most vulnerable people, disaggregated by social categories such as socioeconomic grouping, gender, age, ethnicity and worst-affected areas/ populations
	• Technical aspects according to Sphere standards
	• Inclusion bias
	• Gender equity and specific concerns and needs of women, girls, men and boys (breakdown through geographical analysis and by socioeconomic categories)
	• Beneficiary satisfaction with:
	  • delivery method used,
	  • quality and flexibility of aid received, and
	  • choice and dignity
		Coverage	6. Coordinated, complementary assistance	3. Quality: relevance, coverage, equality	Well-Defined Targeting and Intervention Strategy
					Timing
						3. Coverage: Programme reaches 10-25% of affected people
						10. Programme addresses gender equity and specific concerns and needs of women, girls, men and boys

[4] Core Standards for Economic Recovery and Assessment & Analysis Standards are taken into account

Identified M&E criteria for MBP in WASH	Criteria Description	Relevant humanitarian frameworks				
		OECD-DAC criteria	Core Humanitarian Standards	DfID Value for Money (VfM) Components	MERS standards[5]	Evolved Oxfam's Global Humanitarian Indicator Tool Benchmarks
Efficiency	• Difference between the planned project costs and actual implementation costs • Delivery cost efficiency (comparison) for different MBP approach • Comparison between the administration costs of the intervention and the proportion of funds that went directly to the beneficiaries • Reception cost efficiency[6] of various methods in present values	Efficiency	9. Effective and responsible resource management	1. Cost	Analysis	

Quality of delivery	• Timeliness
	• Beneficiaries' perception of the process:
	  • timeliness, (available when required),
	  • quality of aid (suitability of products),
	  • convenience of access (location, method)
	• Access to essential/critical WASH goods and services in the required quantity and quality (Sphere standards)
		Effectiveness	2. Effective and timely
			8. Competent, well-managed and supported staff
			7. Continuously learn and improve
				2. Speed
				3. Quality: utility, sphere standards
					Staff Competencies
					Programs
						2. Timeliness
						4. Technical aspects of programme align favourably with pertinent humanitarian standards

Market strengthening (as add benefit of MBP)	• Resilience of local markets • Impact on market prices, • Impact on availability of WASH goods and services, both locally and at a wider level • Impact on trader activity, or control over trade in the market • Impact on market rehabilitation • Impact on demand and supply of WASH goods and services in the area	Impact Sustainability	3. Strengthens local capacities and avoids negative effects.	3. Quality: coordination	Market-Oriented Programming Coordination and Effectiveness	8. Partner relationships defined, capacity assessed and partners fully engaged in all stages of programme cycle 15. Response is connected to longer-term efforts for resilient development

[5] Core Standards for Economic Recovery and Assessment & Analysis Standards are taken into account

[6] Cost efficiency of receiving goods and/or services in terms of time effort and money

3 GENERIC MONITORING AND EVALUATION FRAMEWORK

The generic logic framework (presented in Figure 2) aims to capture the key elements of most humanitarian WASH programmes that are based on market based approaches. Given its generic nature, the logic framework focuses at higher level outcomes and outputs rather than measures on the various pathways leading to such changes. Figure 3 presents generic indicators that can be used to monitor progress and impacts related to WASH MBP. The focus is both on:

1 Global accepted and standardised indicators; and

2 Practically measurable indicators by programme implementers.

In many cases, trade-offs had to be made in order to find an acceptable balance between different criteria.

3.1 INDICATORS OVERVIEW

In this section we propose and briefly explain a *minimum* set of indicators to monitor humanitarian WASH market-based programmes (see Figure 3). These indicators are based on generic logic-flow model presented in Figure 2 above.

Proposed generic indicators allow data disaggregation related to gender, poverty and other socio-economic factors (if specified in programme documentation). This is to ensure that the market-based response upholds gender equity and specific concerns and needs of women, girls, men and boys as well as vulnerable groups. The evaluation will therefore assess how well gender and the needs of vulnerable groups are addressed by market-based programming. Details related to data disaggregation for each indicator can be found in the description of each indicator.

Generic indicators, presented in Figure 3, are divided into 4 practical groups:

1 Access-to-WASH indicators (highlighted in purple colour[7]),

2 Quality-of-delivery (highlighted in light green colour),

3 Market recovery and development (highlighted in light pink colour), and

4 Efficiency-of-delivery (not included in the Figure 3 - see explanation below)

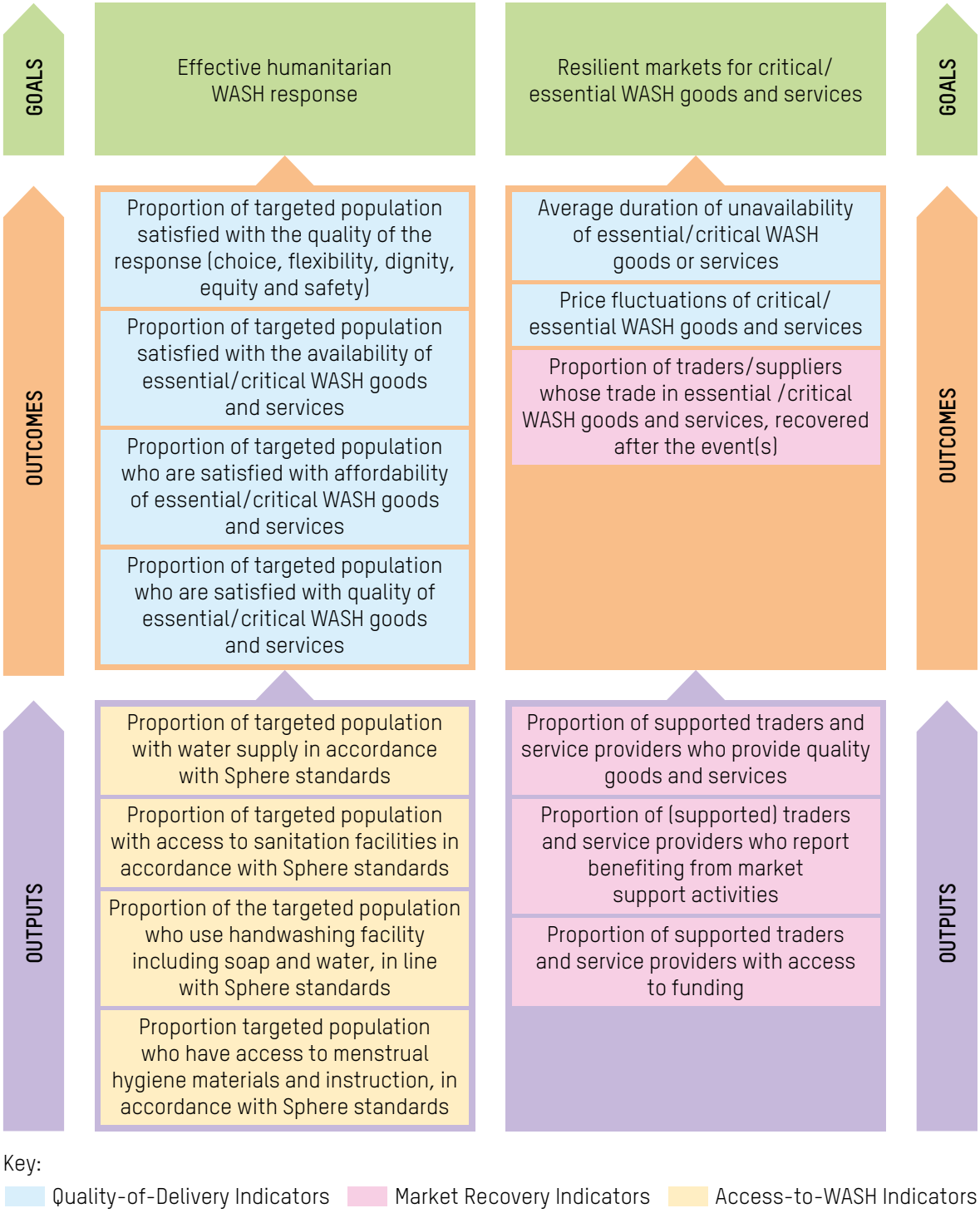
Each of the groups is described in this section with the list of (composite) indicators. Each indicator is described further in more details in Annex 1: Indicators overview.

Indicators relating to efficiency-of-delivery are not visualised in Figure 3 as they are overarching indicators. They are a relation between the achieved outputs and the invested inputs. In this generic framework and, as explained in the Section Summary of proposed indicators (see pg. 13) later in this document, we focus on financial efficiency as:

- the total programme cost per beneficiary reached; and
- the delivery cost ratio.

[7] Note that colours have no relation to colour scheme presented in Figure 2

Figure 3: Overview of generic indicators for humanitarian WASH market-based programmes



3.2 SUMMARY OF PROPOSED INDICATORS

In the reporting, an outcome has more relevance than an output as it describes something that has changed towards a goal. Such changes are typically slow, so early programme reporting relates more to outputs while later ones should relate more to outcomes. Although indicators in Figure 3 relate to outputs and outcomes (as presented in Figure 2), a more practical grouping has been proposed below:

1 ACCESS TO WASH

Proportion (%) of targeted population with access to:

- water supply in accordance with Sphere standards,
- safe sanitation facilities in accordance with Sphere standards,
- a handwashing facility including soap and water, in line with Sphere standards
- to menstrual hygiene materials and instructions, in accordance with Sphere standards.

2 QUALITY OF DELIVERY INDICATORS

Indicators in this group provide information about programme effectiveness from the beneficiary perspective, as defined in Table 1. The framework considers both the point of view of the implementer (provider and/or supplier) as well as the point of view of the beneficiary/consumer.

Proportion (%) of targeted population who are satisfied with the:

- quality of response: choice, flexibility, and dignity,
- availability of essential/critical WASH goods and services,
- affordability of essential/critical WASH goods and services,
- quality of essential/critical WASH goods and services,

as well as:

- Average duration of unavailability of supply of the essential/critical WASH goods and services, and
- Price fluctuations of critical/essential WASH goods & services.

3 MARKET RECOVERY AND DEVELOPMENT

For purpose of monitoring, market recovery is defined as portion of traders that achieve market share/volume, income and response to consumer demand equal-to or higher-than the pre-crisis situation. Although not addressed directly, these set of indicators can inform whether the livelihoods of traders and related staff are guaranteed in a market system. Indicators are formulated in a way that disaggregation per modality of delivery (vouchers, CT, in kind etc) and type of support to traders/suppliers is possible. Indicators include:

Proportion (%) of supported traders and service providers:

- who have access to funding,
- whose trade in essential/critical WASH goods and services recovered after the event(s) throughout the crisis,
- who provide quality goods and services as agreed with implementing agency or in accordance with Sphere standards, and
- who report benefiting from market support activities.

4 EFFICIENCY-OF-DELIVERY

As explained in previous section, efficiency is defined as the degree to which the inputs and activities achieve the desired output towards the end-user or direct-beneficiary. This regards both goods and services for which the minimum indicators focus on cost efficiency of delivering the outputs. Indicators include:

- Cost per beneficiary, and
- Cost delivery ratio.

There are many ways of categorising cost as well as different ways for looking at long term cost and savings which required more detailed cost and benefit analysis. Although we acknowledge its importance, a more detailed analysis falls outside the objectives of this generic framework and the above cost indicators should be considered the minimum required.

We refer to essential/critical WASH goods and services as a set of WASH goods and services that are defined by the programme design. For the purpose of measuring "critical/essential WASH goods and services" can be whole set, or a subset of those focused on by the programme.

3.3 APPLICATION OF THE GENERIC M&E FRAMEWORK

Framework is normally applied:

- In situations where there have been external interventions intended to help people's recovery. These interventions may be across different sectors.
- In communities of people who have continued to reside at the same sites affected by the disaster event, and are looking to restore or improve their lives and livelihoods in the recovery period.
- For situations in which disaster risk-reduction efforts have been under way to reduce future vulnerability to hazards.
- To different crisis type, impact, frequency and duration, to specific communities or across regions receiving aid programmes

The framework is applicable to different levels of market engagement as presented in Section 2.2 which some indicators may become redundant if a programme does not cover all aspects of market based programming (see Table 3).

Table 3: Application of the framework in different levels of engagement, with markets with an overview of type of data collected and main method for measurement for each generic indicator

Indicator/Intervention	Market Use	Market Support	Market Development	Type of data	Methods of measurement
1. Access to WASH					
Proportion of targeted population with water supply in accordance with Sphere standards	✓	✓	✓	Quantitative and Quantitative	Household surveys Observations
Proportion of targeted population with access to sanitation facilities in accordance with Sphere standards	✓	✓	✓		
Proportion of the targeted population who use handwashing facility including soap and water, in line with Sphere standards	✓	✓	✓		
Proportion targeted population who have access to menstrual hygiene materials and instruction, in accordance with Sphere standards	✓	✓	✓		
2. Quality of delivery					
Proportion of targeted population satisfied with quality of response (choice, flexibility, dignity, equity and safety)	✓	✓	✓	Quantitative and Qualitative	Household surveys Focus Group Discussions (FDG)
Proportion of targeted population satisfied with the availability of essential/critical WASH goods and services	✓	✓	✓		
Proportion of targeted population who are satisfied with affordability of essential/critical WASH goods and services	✓	✓	✓		
Proportion of targeted population who are satisfied with quality of essential/critical WASH goods and services	✓	✓	✓		
Average duration of unavailability of essential/ critical WASH goods or services	✓	✓	✓		Supplier survey Market Monitoring
Price fluctuations of critical/essential WASH goods & services	✓	✓	✓		
3. Market recovery and development					
Proportion of supported traders and service providers with access to funding			✓	Quantitative and Qualitative	Supplier survey Review of secondary data Registration Information
Proportion of traders/suppliers whose trade in essential /critical WASH goods and services, recovered after the event(s)		✓	✓		
Proportion of supported traders and service providers who provide quality goods and services			✓		
Proportion of (supported) traders and service providers who report benefiting from market support activities		✓	✓		
4. Efficiency-of-delivery					
Cost per beneficiary	✓	✓	✓	Quantitative and Qualitative	Review of secondary data FDG
Delivery cost ratio	✓	✓	✓		

3.4 BASELINE, PROGRESS MONITORING AND EVALUATION

Identifying change in people well-being at the household level can be done by setting out a logic pathway for the desired change, and measuring changes along the way within different monitoring periods:

1 **Preparedness** – time before the crisis in which a programme may (or not) collect data and prepare for a possible crisis. As not all programmes have the benefit of data collected in this period, the generic framework will only consider this data if it is available.

2 **Early crisis** – period in time when the effect of the event can be noticed, is recognised or continues to deteriorate. It is the period that assessments are made, mitigation strategies discussed and organisations start considering interventions.

3 **Response** – time during which mitigation strategies are taking place but the outcome (related to the intervention) might not yet be noticeable.

4 **Recovery** – duration when the effects of response activities can be noticed in term of outcomes and impacts.

5 **Rehabilitation** – time period after the immediate response is completed or long term rehabilitation activities are developed.

Baseline data can be collected using one of available (market) assessment tools[8]. PCMA and other exercises prior to an emergency or crisis are programmatically important in preparing for a response. Such preparation will not always be available or up-to-date. Some indicators such as those related to market recovery can benefit largely from information referring to a pre-crisis situation. However, in order to keep the framework as generic as possible, we are not assuming that such information is available. Thus, the pre-crisis data can be substituted by the data collected immediately after the crisis using this framework.

Although monitoring should be an ongoing process there are minimal three "moments" that can be distinguished and which are well accepted points over the project period. To determine these moments we adapt Contribution to Change framework (Few et al, 2014), taking into account specifics of WASH sector and objectives of the proposed framework:

BASELINE:

The earliest and most relevant moment for which data is available:

- before the crisis, OR
- early post-crisis:
  - when the effect of the event can be noticed, or
  - the situation is deteriorating and organisations start interacting.

Baseline data collection can be part of a wider assessment, which leads to initiating a response, and consequently mark starting of the monitoring activities. If conducted, existing market assessments should provide a baseline for comparison during the intervention.

PROGRAMME EVALUATION:

Monitoring and learning activity which add to the conclusion about programme efficiency and effectiveness. Usually conducted after response is completed.

PROGRESS MONITORING:

Continuous monitoring of activities outputs as planned in the logic framework and observe if they will lead to the expected outcomes. It is usually conducted during early post response, when the effects of response activities can be noticed.

[8] See Oxfam MBP compass www.cashlearning.org/markets/humanitarian-market-analysis-tools

3.5 DATA COLLECTION UNIT

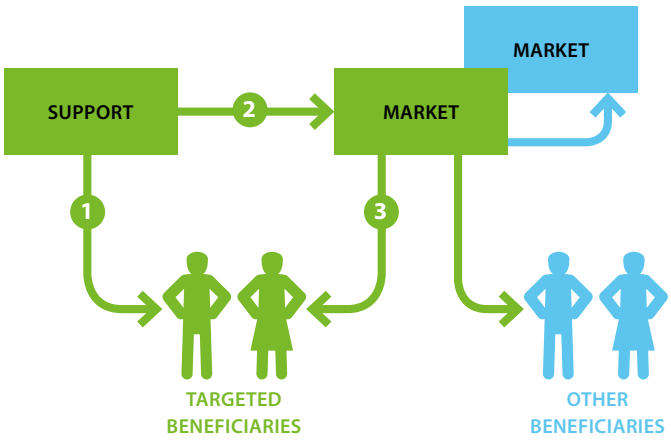
The data is collected at the household, which is defined as "all the people who are: a) sleeping in the same house or shelter, or b) sharing the same (main) meals, or c) share the same service provider". In case of emergency it is likely that people might be displaced. In urban areas, displaced people might share accommodation or live in non-functional public buildings, collective centres, slums and informal types of settlements. In rural settings, delivering protection and humanitarian assistance to displaced population through camps is common. The people who from the household may or may not be related - not all households contain families, but also people who live alone or who share their residence with unrelated individuals.

Although the data is collected at the household level, most indicators are related to the individual household member – beneficiary, as a unit of measurement.

3.6 UNIT OF MEASUREMENT

Estimating the absolute number of beneficiaries is challenging as described in more detail in Annex 4.1. For the purpose of this framework we therefore consider market-based activities as the means to reach the end beneficiary. This means that beneficiaries can only be categorised as direct or indirect when there is a sub group which receives clearly defined benefits. These direct beneficiaries are the targeted population of the intervention. Indirect beneficiaries are those that are expected to benefit from the market-based activities but are not directly targeted as shown in Figure 4.

Figure 4: Direct and indirect beneficiaries



For instance, in market-based programmes, which have some modality of cash transfer or demand generation, direct beneficiaries are defined as those receiving a direct support (cash transfers, voucher, cash for work etc), while indirect beneficiaries are those that use the same market system, for the same WASH items but do not receive the support from the program. When no clear distinction can be made between direct and indirect beneficiaries it is recommended not to use these terms but refer to them as beneficiaries. We distinguish two ways of estimating the number of beneficiaries as explained in detail in Annex 4.1.

3.7 METHODS OF MEASUREMENT

This framework employs a mixed methodology approach (see Table 3 above), incorporating both primary qualitative data collection, and analysis of existing quantitative data from program documents. Existing data included project documents, initial needs assessments, pre-crisis market assessments and baseline survey data (household and market surveys), project financial and HR records. In order to address the objectives of this framework, we propose a number of methods, briefly described in this section. For detailed description of methods for measurement, please see Annex 3.

HOUSEHOLD SURVEYS

Household surveys are a data collection method in which information is collected from homes where people live (see Annex 3.1). When not all households can be visited, a sample method can be used to reduce the number of households to visit (see Annex 4.2). The key is that the selection of the sample is representative for the larger population to get accurate results. During the household visit, surveyors can also conduct observations (see Annex 3.6). Household surveys are common as they allow for very standardised ways of data collecting. A large number of households in surveys allows for precise results.

FOCUS GROUP DISCUSSION (FGD)

FGDs are critical in determining the reasons behind the trends which emerge from the quantitative data collected and investigating more sensitive issues such strengthening or weakening of intra household and community bonds which may be a result of the market-based programming (see Annex 3.2) . A group of independent field monitors will be trained specially in the use of the techniques needed to gather this kind of data.

Focus group discussion is a process in which a variety of targeted people are selected with some degree of randomness to discuss mainly amongst themselves with as little as guidance as possible by the facilitator who only steers the discussion towards the topics of interest but does not participate actively in it. Focus group discussion should not be confused with group interviews in which questions are asked to a group of people and a consensus is found (or not) by the group in brief discussion.

REGISTRATION INFORMATION

The existing registration of beneficiaries by all project partners will enable the creation of a global list of beneficiaries which it is possible to disaggregate by gender, household size, socio-economic status (if known), age of a head of household and easy vs hard to reach areas (geographically). A representative (random) selected sample of the target populations (HH) could to be created to:

- Check if they received the intended response modality,
- If they used or could use the aid modality they received, and
- If their socio-economical profile fulfils that of the targeted population.

We assume that these information is available and that is standard part of response design and implementation. We also assume that its data quality will allow necessary disaggregation.

COMPLAINT MECHANISM

Complaint mechanism enables beneficiaries and non-beneficiaries who have issues with targeting, aid delivery or other aspects of the programme to register their complaint with the relevant implementing NGO in their area. Complaints can be made in two ways: 1) in person to a member of NGO staff, or 2) by calling or sending a text message to a designated mobile phone number. In both cases, the NGO fills in a form and follow up on the complaint. The use of both these systems will depend on whether people know about them or not. The extent to which it is uses is assessed on the administrative evaluation of the complaint process. We assume that the data is available and is standard part of response design and implementation.

INTERVIEWS WITH TRADERS

These short (semi-structured) interviews, conducted together with monthly market monitoring (see below), assess traders' perceptions of changes in market behaviour, demand, supply, market share and other qualitative factors. For more information on method see Annex 3.3.

MARKET MONITORING

Prices, availability and stock levels of essential/critical WASH goods and services collected (bi)weekly within the first month after the intervention, and later once a month to enable tracking of prices over time (see Annex 3.5) . The data will be used to assess the programme's impact on supply, demand and pricing in the market system.

3.8 FRAMEWORK IMPLEMENTATION WITH ICT TOOLS

This framework was created so it can be easily implemented without any need for technology beyond pen and paper. As data collection technologies are commonly used nowadays we provide an example of an ICT implementation which uses:

- SurveyCTO for data collection, and
- MS Power BI for data analysis and reporting.

Both are widely available and facilitate in particular programmes with the need for repetitive and comparative data collection and analysis. The advantage of a tool like Power BI is that it also allows to aggregate data and information from multiple programmes which allows a kind of meta-analysis. The tool selection was based on:

- tool's characteristics as described in ICT tool overview paper,
- tool's flexibility and sharing options (internal and external),
- easy-to-use interface for mobile phone, and
- Oxfam's internal ICT development strategies and policies.

Three comprehensive questionnaires are developed using Survey CTO:

- **Household (HH) questionnaire**, which address both WASH HH survey and post-distribution monitoring (PDM). It can be conducted at any moment during the programme (scoping study, baseline, midline, endline or ad-hoc) and is applicable for different MBP modalities due to the use of an elaborated skip logic.
- **Supplier survey**, which can be also used at any moment during the programme and focus on contribution of the intervention to market recovery.
- **Programme Data form**, which aims to collect, as detailed as possible, cost of the programme implementation by certain organisation.

The full set of questionnaires is presented in Annex 3 and available to download at:
https://oxfam.box.com/s/pxiugvjfqhpz7kluh1iyqkubn672c3gh

A detailed monitoring report was developed using Power BI's dashboards. The report presents the analysis and an overview of indicators defined in this framework. Report template files are available at:
https://oxfam.app.box.com/s/k21anp4wjtb1wy92md6ch0a0e8ee5z30.

User Guidelines for ICT implementation is available to download from:
www.emma-toolkit.org/sites/default/files/bundle/Oxfam%20ICT%20Guidelines.pdf

4 CAPACITY BUILDING RECOMMENDATIONS

Field / project staff responsible for data collection have to have the necessary capacity and skills to collect quantitative and qualitative data of sufficient quality and in accordance with indicators provided in this framework. Staff involved in monitoring activities need to be comfortable with different method and tools, as well as informed sufficiently about the purpose of the exercise as these influence greatly the quality of data collected. The team leader/project manager needs to be involved with and supervise data collection, data analysis and reporting process.

In addition, in order to use already developed ICT tools for this framework (as described in Section 3.7) staff need to get familiar with them, and therefore a basic orientation training need to be available (either on-line or face-to-face), ideally as a part of programme preparation phase. We recommend to have a focal point (either Global Oxfam WASH or M&E expert) whose responsibilities would also include ownership of - and sharing/capacity building for - this framework and associated tools.

It is foreseen that the Framework and ICT tools will be used in multiple countries. As Oxfam often work with (local) partner organisations, there is a need to ensure buy-in of the tool from partner organisation. We assume that local partners would be supported in data collection and sharing. Hence, some capacity building/training for data collection and analysis will be needed for field staff and local partners.

Aggregation of data and analysis at the HQ level over multiple programmes adds an extra incentive for the different programmes to coordinate and standardise the MBP-monitoring. This in turn can then contribute to the burden of proof of various implementation modalities.

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ANNEX 1: DETAILS OF INDICATORS

1.1 ACCESS TO WASH

	Indicator Name	Rationale	Definition and Units	Methodology Guidance
Output 1.1.1: **Number of people with:** • **Access to WASH goods and services** • **Better WASH knowledge and practice**	**Proportion of targeted population with water services in accordance with the Sphere standards**	WASH interventions need to provide people with basic access to water and sanitation. This indicator measures an increase to an earlier state (such as a baseline) of population that have access to water and sanitation (in accordance with Sphere standards) or to a higher level of access if the baseline access level is considered insufficient.	This indicator measures a change of the proportion of people using Sphere compliant water sources at the households level in comparison to an earlier times, expressed in number of people that live in a household that has a basic water service. This measure is a proxy for "Access to WASH goods and services". Sphere standards for water supply are addressed. Questions includes: • Primary source of water • Volume of drinking water that household collect • Satisfaction with drinking/cooking water quality • Household water treatment methods • The distance between household and the nearest water point • Queueing time at the water point Calculation: $\frac{\textit{population with water services according to Sphere standards}}{\textit{total size of the targeted population}}$	The measures are relatively straightforward as long as the baseline and subsequent monitoring measures are comparable. Before using the Sphere standards definitions it is best to look for national definition which are often enshrined in law. Where possible use questions and response categories which can be applied to calculate both national and Sphere standards. Observation need to be done with consent of the surveyee and not in secret. Attention is needed at the counter intuitive situations with large fluxes of people. It allows for the common situation in which for example the absolute number of people not practicing good hygiene can go up while the proportion of people practicing such a behaviour goes down. This is a common and normal situation. Attention to cultural issues around menstrual hygiene.
	Proportion of targeted population with access to sanitation facilities in accordance with the Sphere standards		This indicator measures a change (increase) of the proportion of people using Sphere compliant sanitation facilities in comparison to the baseline. It uses the Sphere standards to estimate the percentage of targeted households that has access to sanitation facilities of sufficient quality (Excreta disposal standard 2: Appropriate and adequate toilet facilities and Excreta disposal standard 1: Environment free from human faeces). Questions includes: • Type of sanitation facility household use • Distance of the sanitation facility from the household • Quality and safety of sanitation facilities • Distance between the pit, septic tank or infiltration field of the latrine and water point used by household • User satisfaction with quality of the facilities • Safe excreta disposal Calculation: $\frac{\textit{population with sanitation according to Sphere standards}}{\textit{total size of the targeted population}}$	

	Indicator Name	Rationale	Definition and Units	Methodology Guidance
Output 1.1.1: **Number of people with:** • **Access to WASH goods and services** • **Better WASH knowledge and practice**	**Proportion of the targeted population who use handwashing facility including soap and water, in line with Sphere standards**	In MBP it is assumed that the combination of making hygiene products available in the market, combined with hygiene education and/or promotion will improve hygiene behaviour among targeted population. Hygiene behaviour is an important and cost effective measure. The basis for these measures are the Sphere Hygiene promotion standards.	This indicator measures a change of the proportion of handwashing practitioners to an earlier moment in time. This is a proxy for "Better WASH Knowledge and practice". For the purpose of measuring it is assumed that if a household has water, hand soap (or alternatives) and a basin or "tap", all its members (are likely to) have good hygiene practices. This indicator uses the observed presence of water and hand soap (or accepted equivalent) at the household as a reliable proxy for the handwashing behaviour of the household members. Indicator relates to Sphere Hygiene promotion standards. Calculation: $\frac{\textit{population using handwash facilities with soap and water}}{\textit{total size of the target population}}$	The measures are relatively straightforward as long as the baseline and subsequent monitoring measures are comparable. Before using the Sphere standards definitions it is best to look for national definition which are often enshrined in law. Where possible use questions and response categories which can be applied to calculate both national and Sphere standards. Observation need to be done with consent of the surveyee and not in secret. Attention is needed at the counter intuitive situations with large fluxes of people. It allows for the common situation in which for example the absolute number of people not practicing good hygiene can go up while the proportion of people practicing such a behaviour goes down. This is a common and normal situation. Attention to cultural issues around menstrual hygiene.
	Proportion targeted population who have access to menstrual hygiene materials and instruction, in accordance with Sphere standards		This indicator measures a change (increase) of the proportion of menstrual hygiene items in the household and training according to needs. It follows Sphere standards for Hygiene promotion standard 2: Identification and use of hygiene items. Possible questions could be: • Use of menstrual hygiene management products • MHM products availability • Suitability of sanitation facilities for MHM Calculation: $\frac{\textit{population with access to menstrual hygiene materials and knows how to use them}}{\textit{total population of menstruating age}}$	

VALUE TYPE AND UNIT OF INDICATORS:

- The difference in percentage of targeted population that has access to basic WASH goods and services between baseline and the moment of the measurement gives a result in percentage points. The median for any measurement can be compared to the median of the base line.

MEASUREMENT METHOD:

- Household survey in which the surveyor is face-to-face with the surveyee. Surveyor also need to observe the water source, sanitation and handwashing facilities, as it is required by Sphere standards. More details on household surveys are presented in Annex 3.1, and on observation in Annex 3.6.

SOURCE OF DATA:

- Enumerator administered, face-to-face household surveys using a representative sample. For more details on sampling methods, see Annex 4.2.
- Possible sources of baseline data: Scoping study, Rapid needs assessment, National data related to access to WASH

CROSS ANALYSIS:

- Analysis is possible distinguishing the households according to various socio-economic measures such as women lead household, poor households and other.

EXAMPLES:

1 In a programme a representative sample of 100 households is taken of which 72 households have access to water services according to Sphere standards. 72 households in the sample with access to water services have a total of 418 household members, while the total number of household members in the sample is 620. The proportion of the household members having access to water services according to the Sphere standards becomes:

$$\frac{\text{418 household members in the sample}}{\text{620 household members in the sample}} = 67\% \text{ of the population}$$

2 In a programme a representative sample of 100 households is taken in which 98 households have women of menstruating age. Of the 98 households only 54 households have access to menstrual hygiene materials and knows how to use them. In the 98 households there is a total of 225 women of menstruating age while in the 54 households with access to menstrual hygiene materials there are 124 women of menstruating age. The proportion of household member having access to menstrual hygiene materials becomes:

	In sample	HH with women of menstruating age	HH with access to MHM
No of households (HH)	100	98	54
No women of menstruating age		225	124

$$\frac{\text{household members in the sample}}{\text{225 household members in the sample}} = 55\% \text{ of the women of menstruating age}$$

1.2 QUALITY OF DELIVERY

	Indicator Name	Rationale	Definition	Methodology Guidance
Outcome 1.1: **Reliable access to critical/essential WASH goods and services for targeted population at:** • **Right time and place (availability)** • **Right price (affordability)** • **Sufficient quality and quantity (Sphere standards)**	**Proportion of targeted population satisfied with quality of response (choice, flexibility, dignity, equity and safety)**	The aim of market based programmes is to effectively meet the requirements of essential/ critical WASH goods and services of people in need, taking into account all market activities as well as beneficiaries individual circumstances, providing them with flexibility and dignity of choice. To be able to estimate if certain modality are more appropriate for beneficiaries compared to others, it is important to monitor beneficiaries satisfaction with the type of aid modality received.	This indicators measures the beneficiary satisfaction with appropriateness of aid modality received expressed as: • **Sufficiency in choice**: A variety of different product and services as well as choices within the same product to satisfy my household's needs • **Flexibility in choice**: The convenience of obtaining the product and services of choice that suit my households need. • **Dignity of choice**: The feeling being worthy, "honoured" or "respected" through the available choice and process. • **Equity**: The degree to which the process increases equity which is defined here as a process that prioritise the most in need. • **Safety**: The process that maintains or increases safety and in no way decreases safety of its beneficiaries. Calculation: $\frac{\textit{Number of beneficiaries satisfied with the quality of the response}}{\textit{Total number of beneficiaries}}$	Recipients of aid are often grateful for the aid they received which might influence how "truly" they will be with their response. So it is important to put respondent at ease, explain that the best way is to be as truthful as possible and that there will not be any direct or direct consequences of what they answer.
	Proportion of targeted population satisfied with the availability of essential/critical WASH goods and services	The ultimate goal of emergency intervention is to provide population in need with essential WASH goods and services when they need them and where they need them. Using a marked based approach this means to ensure that all market conditions are there to purchase the required goods and services.	This indicator measures if essential/critical WASH goods and services were available to ensure that targeted beneficiaries could obtain goods in a timely and convenient manner. This is done by measuring beneficiary satisfaction with availability of essential/critical WASH goods and services in emergency as a proportion of beneficiaries expressed in a percentage. • **Availability** is meant at the right place on the right time • **Convenience** means the ease of availability Calculation: $\frac{\textit{Number of HH members satisfied with the availability of WASH goods and services}}{\textit{Total number household members targeted for WASH goods and services}}$	This indicator can be repeated for separate goods and services (for example Water/ Sanitation and/or Hygiene) so individual information is available. For the purpose of measuring It is not required to do this for every single good or service but rather for a selection that represents the overall goods and services.

	Indicator Name	Rationale	Definition	Methodology Guidance
Outcome 1.1: **Reliable access to critical/essential WASH goods and services for targeted population at:** • **Right time and place (availability)** • **Right price (affordability)** • **Sufficient quality and quantity (Sphere standards)**	**Proportion of targeted population who are satisfied with affordability of essential/critical WASH goods and services**	It is important to check if people think that prices (even if they were stable during the intervention) of essential WASH goods/ services were affordable for them. If cash transfers are made available this question will often remain as the transfer might not cover enough for all WASH needs or it can be asked for products outside the supported goods. If the marked support is to be effective both supported and unsupported goods should become affordable.	This indicator measures if critical/essential WASH goods and services included in the programme/assistance are made available to the targeted beneficiaries at affordable prices. Proportion of targeted beneficiaries who are satisfied with affordability of essential/critical WASH goods and services Calculation: $\frac{\textit{Number of HH members satisfied with the affordability of WASH goods and service}}{\textit{Total number of HH members targeted for WASH goods and services}}$	If an overall answer is required one can look for the median value which is the category containing 50% when cumulative percentages are calculated.
	Proportion of targeted population who are satisfied with quality of essential/ critical WASH goods and services	Satisfaction with the choice of the most needed product gives beneficiaries to some degree and sense of everyday life before the crisis. The aim is to measure if they feel dignified with the choices they are given and in particular with quality of the goods that are available to them.	This indicator measures beneficiaries satisfaction with the quality of essential/ critical WASH goods and services, delivered to them during the response, expressed in a percentage of beneficiaries. Calculation: $\frac{\textit{Number of HH members satisfied with the quality of WASH goods and service}}{\textit{Total number of HH members targeted for WASH goods and services}}$	As there might be a multitude of products and services some particular product or service will need to be chose as representative for the whole basket of goods and services provided.

	Indicator Name	Rationale	Definition	Methodology Guidance
Outcome 2.1: Market for critical/ essential WASH goods and services (and its infrastructures) are: - restored / uninterrupted - strengthened - developed (included where appropriate)	**Average duration of unavailability of essential/critical WASH goods or services**	One of the objectives of market support is to increase the availability of critical/essential WASH goods and services to the target population with as ideal a non-interrupted supply. The mean interruption of a good will describe the maximal average period people will have to remain without the desired good. This measurement is possible in both contexts with or without displacement of populations.	This indicator measures the mean number of days the supply of WASH goods and service was interrupted in the last month, expressed in number of days. An interruption of supply is defined as a moment that a consumer desires a good or a service and its unavailability at the moment of the request until the moment the consumer obtains the good. The mean number of working days of unavailability in the last two week is calculated as: $\frac{\textit{The total number of days that goods were not available across HHs}}{\textit{Total number of households with interrupted supply}}$ And expressed in number of days. The **mean number of unavailability** is calculated as the average value across all household. A similar indicators can be calculated at the supplier level by adding all the measures of unavailability at supplier together and divide this by the number of traders that provided unavailability figures.	A calculated example could look like this: In a month's time two measurements are made with two weeks intervals on the water supplied to a community. The time resolution for measurements is one day defined as midnight to midnight. In the first two weeks there are three interruption measured. The first two interruption are each around an hour long the same day while the other one is a 24 hour event that starts one early afternoon and ends the next day in the late morning. As the first two events happen the same day they are considered as one event taking one day long as that is the minimum time unit. The later event is one event that takes two days long. In the second two weeks the same pattern repeats so that the total number of events becomes 4 while the total time of the interruption is considered 1 + 2 + 1 + 2 = 6 days. The mean time of interruption becomes 6 days divided by 4 events or 1.5 days on average/week.
	Price fluctuations of critical/essential WASH goods and services	Market prices depend on many factors, out of which only few can be impacted by the programme. However, stable pricing can be an indicator of a stable marked, in which households can plan their purchases.	Price fluctuation monitoring is established by collecting prices for critical goods and services each month and calculate the difference between minimum and maximum prices among suppliers in the intervention area. It results in a graph showing time series trend (or stability) in pricing of essential/critical WASH goods and services. This can be measured per (un)supported trader or for traders in general as well as for individual goods and services or goods and service "baskets". There are different ways in which prices can fluctuate but capturing those in a single measure is challenging while visualising this in a graph makes this easier.	The time between two measurements will depend very much on the intervention phase. For example it can be collected biweekly during an emergency phase or once a month during more stable periods. The information will typically be provided by supported traders and can be collected either by phone, or during the visit, following the Market Monitoring Form.

VALUE TYPE AND UNIT OF INDICATORS:

- Proportion of people expression user satisfaction
- Average duration of unavailability in days
- Graph of product prices over time

MEASUREMENT METHOD:

- Household survey in which the surveyor checks to which degree the respondent agrees with different statements using 5 point likert scales. The questions have all an identical likert scale which is an ordinal scale varying from strongly agree to strongly disagree.
- Traders interview or traders survey (see Annex 3.3)
- Market Monitoring Form (see Annex 3.5)
- Best is to ask trades either to keep a logbook on information needed or to set up regular phone-based data collection to ensure there are no recall issues.

SOURCE OF DATA:

- Household survey
- This will often be based on primary data, collected within the programme. Data can be found in traders accounting books if available or by self reporting in phone or face-to-face surveys. A logbook by the trader can help to ensure these remember accurately the prices and supply interruptions if regular collecting prove challenging. Consumer studies is another source for such info.

CROSS ANALYSIS:

- Analysis can be done according to gender, poverty, hard to reach populations and other socio economic differentiation available and captured for each household.
- Not Applicable

EXAMPLES:

- Level of satisfaction is calculated by taking the median as follows in the example below:
  The answer category any one of the satisfaction is as described in the table

Answer category	% of people per category	Cumulative % per category	
Very satisfied	11	[00–11]	
Satisfied	32	[11–43]	
Neither satisfied nor dissatisfied	37	[43–80]	← contains the median (50%)
Unsatisfied	14	[80–94]	
Very unsatisfied	6	[94–100]	

1.3 MARKET RECOVERY AND DEVELOPMENT

	Indicator Name	Rationale	Definition	Methodology Guidance
Outcome 2.1: **Market for critical/ essential WASH goods and services (and its infrastructures) are:** • **restored / uninterrupted** • **strengthened** • **developed (included where appropriate)**	**Proportion of traders/ suppliers whose trade in essential /critical WASH goods and services, recovered after the event(s)**	This measures one aspect of market recovery as a portion of supporter traders that recovered their businesses after the crisis compared to before or immediately after the event. It assumes situations with or without displacement where markets already exist. It estimates the proportion of trades that can maintain their activities and measures indirectly if the livelihood of these traders and their staff is guaranteed in a market system that is no longer externally supported by the programme. If new markets are developed and traders develop new businesses there will be no comparison with business levels before the event and this indicator is not applicable.	Market recovery for purpose of monitoring is defined here as portion of supported traders that achieve market share/volume, income and response to consumer demand which is equal to or higher than the pre-crisis situation weather this was / was not measured before the crisis. Each of these are further described as: • Trade provides an income to the business owner and staff which is equal or higher than its pre-crisis level volume. • Can the supplier answer the current consumer demand • Recovery can only be measured beyond any possible market distortion due to e.g. external support. • Proportion of traders/businesses which maintained or recovered their during and after the crisis. Calculation: Proportion (%) = Number of (supported) suppliers (for a selected product or service) that recovered / Total number of supported suppliers	This indicator, whether collected by interview, survey or focus group discussion is based on self reporting by traders and service providers. Its accuracy is limited to correct perception by the interviewee of their current situation and if a comparable situation was already experienced in the past.
Output 2.1.1: **Increased access to Financial Institutions**	**Proportion of supported traders and service providers with access to funding**[9]	Cash flow problems are one of the most common problems for traders as they need to buy goods with money they only will receive once the goods are sold. Even successful companies selling NFI in high income countries can struggle with the capital that is held in stored goods which can have a long shelf life. Access to financial institutions (FI) improves the traders capacity to bridge periods of hardship and contributes to maintain a viable business during a crisis..	This indicator measures if marked based interventions have strengthened the markets by providing traders better access to financial institutions. This can be done by comparing the proportion of traders and service providers (who have access to FI) at the beginning of the intervention with the proportion at the end of the programme.	The question: "Do you have a reliable source of credit if your business would need it?" to is based on the self reported perception of the trader that he would be allowed a credit product without little ability to test the hypothesis.

[9] Funding is the act of providing financial resources, usually in the form of money, or other values such as effort or time, to finance a need, program, and project, usually by an organisation or government.

	Indicator Name	Rationale	Definition	Methodology Guidance
Output 2.1.2: Number of goods and service providers: • **Providing quality goods and services** • **With increased business continuity and quality knowledge** • **With better business/supply networks**	**Proportion of supported traders and service providers who provide quality goods and services**	One of the objectives of market support is increasing the number of suppliers of critical/essential WASH goods and services who deliver quality goods and services to the target population.	The number of supported service providers who provide quality goods and services (in accordance with Sphere Standards) over the last month, expressed in a proportion of the total supported providers. • **Supported providers** are those providers of goods and service which are included in the programme. • **Quality** of WASH goods and services will be defined in contract agreements with suppliers within the programme. This will also relate to the Sphere standards which describe the standards that humanitarian actors should aim for. The description of quality will depends on the relevant goods and services. Calculations: $\frac{\textit{Number of supported suppliers which deliver quality goods and services}}{\textit{Total number of supported suppliers}}$ If resources allow a similar assessment can be done amongst unsupported suppliers to see if the provision of quality goods rub of to the unsupported.	Survey of all (or a representative sample of) traders can be integrated in programme visits for other purposes and does not require a visit only for the purpose of verification. For the purpose of measuring not every single product or service has to be included in such an evaluation. The results (as they aim to be representative for all goods) can be presented as results for overall provision for quality of goods and services.
	Proportion of (supported) traders and service providers who report benefiting from market support activities	For resilient markets, it is important that the livelihood of the trader and his/her staff is guaranteed in the market system.	This indicator measures proportion of supported WASH suppliers and service providers who report their business benefiting from the intervention. Questions includes: • Was various support activities the trader received suitable for his/her business, • How did these activities benefited the business, • Do they feel better equipped to deal with changes in markets due to emergencies, • Did it (in their opinion) increase their business management knowledge and skills, and how.	The large number of activities that can influence market resilience makes a generic indicator challenging to monitor, but the key question remains if market activities during the intervention benefited the trader. We suggest to ask the trader such questions directly in a small survey, which will have to be adapted to the local programme and context.

VALUE TYPE AND UNIT OF INDICATORS:

- Number, portion expressed in percentage of suppliers. The subtraction two different percentages (e.g. endline and baseline) gives a result in percentage points.

MEASUREMENT METHOD:

- Self reported situation through (semi-structured) interviews or a survey with a representative sample of suppliers included in the programme.
- Verification of conditions through direct observation of the goods and services in comparison to those agreed with the supplier or service provider.
- Where technical testing needs to be done on products, provision will already be made for trader compliance testing and such results should be used if they proof relevant for specific indicator.
- For more details on methods see Annex 3: Methods of measurement

SOURCE OF DATA:

- Primary data collection through a supplier survey
- Secondary data review: Traders sales and stock books (if available)

CROSS ANALYSIS:

- Poverty and gender status of the suppliers (female vs male-owned business) and their staff can be considered as well as other socio-economic sensitivities (if they are defined and collected in the programme, interview or survey).

1.4 EFFICIENCY OF DELIVERY

	Indicator Name	Rationale	Definition	Methodology Guidance
Outcome 1.1: **Reliable access to critical/essential WASH goods and services for targeted population at:** • **Right time and place (availability)** • **Right price (affordability)** • **Sufficient quality and quantity (Sphere standards)**	**Cost per beneficiary**	Cost remains an important consideration in projects. They become more meaningful as a figure when divided by the number of people or households benefiting from this expenditure.	Calculations: $\frac{\text{Total Cost}}{\text{Total number of beneficiaries}}$ The **cost information** can be the planned or budgeted cost if these approximate the real cost. Real cost can be divided up in: • setup-cost (relating to the whole project), and • running-cost related to a time period for example monthly running cost. For really accurate expression of cost one should, on top of **direct cost**, also take account of **indirect cost**, which are might not always be available as a clear expenditure (direct cost). **Beneficiary information** can be the intended or the actual number of beneficiaries expressed in number of households or individuals. A distinction is also made between direct and indirect beneficiaries, as discussed in the guidelines, which might be taking into account when using this indicator. What exactly is measured needs to be documented for the indicator to be informative.	For example the running costs of a five month long programme cost 580,000 U$D while serving 10,000 beneficiaries. Then the cost per person is: $\frac{\text{Total Cost}}{\text{Total number of beneficiaries}}$ $= \frac{580{,}000 \text{ USD}}{10{,}000 \text{ beneficiaries}}$ = 58 USD / beneficiary
	Delivery cost ratio	A delivery cost ratio informs the project of its efficiency in delivering goods, by comparing two costs. A simple cost ratio is the total value of "delivered" goods compared to the total cost of the programme or project.	Delivery cost ratio (DCR) is the total value of the products obtained by the beneficiaries divided by the total project cost of the project. Calculations: $DRC = \frac{TVG}{TPC}$ TVG: Total Values of goods received by beneficiaries TPC: Total Programme Cost. When possible an alternative cost ratio is to divide the total value of products obtained by the beneficiaries over a given period by the total running cost of the programme over that same period. Running cost refer to excluding the one-off or investment cost from the total cost used in the indicator above. This cost ratio will be higher and gives a better idea of how much the delivery costs in comparison with the value of goods received by the beneficiaries. As in the previous indicator direct and indirect cost might be considered.	Example: a program spends $80,000 with a total value of $50,000 in goods received by the beneficiaries. Its DCR becomes: $DRC = \frac{TVG}{TPC} = \frac{50{,}000 \text{ USD}}{80{,}000 \text{ USD}}$ = 0.625 = 62.5% This means that, for every $100 spend in the project 62,5$ was obtained by the beneficiaries in goods (or services).

VALUE TYPE AND UNIT OF INDICATORS:

- For cost per beneficiary: Number/cost in a reference currency per individual or household. Depending how the calculation is done can be presented as [currency/pers/month] or [currency/pers/year] or just [currency/pers] for a particular intervention.
- For cost ratio there is unitless number <1

MEASUREMENT METHOD:

- Typically a desktop review of project proposals finances, procurement records and human resources data distribution and beneficiary records.

SOURCE OF DATA:

- Typically this will done using secondary data, as a lot of the required information is already captured for other purposes. Often there is a need to rework the data for analysis.

CROSS ANALYSIS:

- Cross analysis is not possible for poor, gender and other socio-economic groups, as most costs can not be differentiated for these groups.
- It might be possible to differentiate the cost of different delivery approaches for example if these are present in the project and cost or kept in such a way as comparisons can be made

POINTS OF ATTENTION:

- The cost for the goods paid by the organisations in a cash transfer programme is more in the line with the recommended retail price (RRP) than the wholesale price.
- For recurring crises the first year is often characterised by high cost due to one-off investments and from year 2 onwards the overall cost are lower and mainly running cost.
- When there are significant changes in the value of money or goods central to trade such as for example fuel. In long term projects or countries with hyperinflation there can be larger changes in the cost of goods than changes in the actual value of the goods themselves. In such cases reducing all the cost to their present value or the value of a reference year and a more stable reference currency might be required. Such work might require the support of an economist.
- Costs depends on various factors affecting cost ratios which makes them more comparable within projects than amongst projects.

EXAMPLE:

- Based on the questionnaire.
- In a programme costing in a total of 120,000 U$D (TPC) a voucher and e-cash programme has handed out the equivalent of 75,000 U$D. At the end of the programme the beneficiaries have been using 98% of the value of the voucher and e-cash to pay for goods and services. This means that the Total Value of Goods and Services (TVG) is the 75,000 U$D handed out times the 98% used or 75,000 x .98= 73,500 U$D = TVG

$$\frac{TVG}{TPC} = 98\% \quad \frac{75{,}000}{120{,}000} = 61\% \text{ delivery cost ratio (DCR)}$$

ANNEX 2: RELATION OF THE SURVEY QUESTIONS TO INDICATORS AND SURVEY CTO VARIABLES

Three sets of questionnaires were developed using Survey CTO, aiming at collecting information related to:

- households (WASH, user satisfaction and post-distribution survey)
- suppliers satisfaction and performance (including Market Monitoring Form),
- programme financial data.

Surveys are developed in a way to collect all necessary information for a detailed data analysis. Forms can be found at: www.emma-toolkit.org/documents/survey-cto-bank. The table below present relation between generic indicators (first column), the main survey questions[10] (middle column) and its variable names as defined in SurveyCTO platform[11] (last column).

1	Access to WASH		SurveyCTO Variable[10]
1.1	**Proportion of targeted population with water services in accordance with the Sphere standards**	What is the primary source of water for your HH?	WaterSource
		Please specify:	OtherWatersource
		How many litres of drinking water your household collected yesterday?	WaterVolEstimated
		For how many people did you or any of your HH members collect water yesterday?	NumberOfPeople
		Which recipients do you use to store water?	WaterStorageRecipients
		The quality of the water for drinking and cooking is ... ... of very bad quality ... not so good quality ... of just sufficient quality ... of good quality ... of very good quality	WaterQualitySatisfaction
		What kind of household water treatment do you use for your drinking water?	HhWaterTreatwater
		Describe the "other" water treatment method.	OtherTreatMethod
		The distance to the nearest water point your household uses is ... ... more 500 meter or ±720 steps/passes away ... is around 500 meters or ±720 steps/passes away ... is less than 500 meters or ±720 steps/passes away	WaterPointDistance
		The last time you collected water how long did you have to queue at the water point?	WaterPointQueing
		Is there a functioning drainage that takes the spillover away from the water point an prevents puddles and mud pools.	WaterPointDrainage
		Is there erosion around water point caused by spilled water?	WaterPointErosion
		Is the water point built in such a way that it less likely to be flooded?	WaterPointFlooding

[10] Main survey questions are identified as the minimum for an informed analysis.

[11] SurveyCTO variable names cannot contain space or special characters, and are used for the analysis using PowerBI software. See the guidance document for more details.

1.2	**Proportion of targeted population with access to sanitation facilities in accordance with the Sphere standards**	What type of sanitation facility members of your household use?	ToiletType
		Please specify "Other toilet type":	OtherToiletType
		Is the facility you use shared with people beyond your household?	ShareToilet
		How far is the sanitation facility form your house or the place you sleep?	ToiletDistance
		Are the sanitation facilities providing sufficient PRIVACY and SAFETY at ALL times (DAY and NIGHT), with sufficient SEPARATION between the man and women facilities?	ToiletSafety
		Is the pit, septic tank or infiltration field of the latrine used by this household at least 30 steps away from water source you use?	ToiletDistanceToWatersource
		How happy are all the members of your household with the sanitation facilities you are currently using?	ToiletSatisfaction
		How are the faeces of children disposed of in you household?	ChildExcertaDisposal
		Sanitation Facility GPS	ToiletLocation
		Is the environment in which the affected population lives free from human faeces?	CleanEnvironment
		Are sanitation facilities kept clean?	CleanToilet
1.3	**Proportion of the targeted population who use handwashing facility including soap and water, in line with Sphere standards**	Did any of you HH members attend hygiene-related training/ workshop/awareness programme?	trainingparticipation
		Which are for you the main reasons to promote/encourage members of your family/household to use sanitation facilities?	ToiletUseReason
		Yesterday, at what point did you wash your hands?	HandWashKnowledge
		Can you show me where do you wash your hands?	HandWashingFacility
		Does the handwashing place looks used?	HandWashingFacilityUse
		Which items are present at handwashing place?	HandWashingItems
		Are there pools and lodged water at hand washing facility?	HandWashingDrainage
		What are the main hygiene items your HH still needs?	HygieneNFI
		(Other) Please specify	HygieneNfOther
1.4	**Proportion targeted population who have access to menstrual hygiene materials and instruction, in accordance with Sphere standards**	What do females in your HH use for menstrual hygiene management?	MhmItems
		Are materials for menstrual hygiene available and easy to obtain?	AvailabilityMHMitems
		Have all menstruating female household members been trained in the use of all menstrual hygiene products you have access to?	MHMtraining
		Does the toilet facility your HH uses, provides appropriate disposal of menstrual material?	DisposaMHMitems
		Does toilet facility your HH use provide appropriate private washing facilities for menstruating females?	ToiletMHMprivacy

2	Quality of delivery		SurveyCTO Variable
2.1	Proportion of targeted population satisfied with quality of response (choice, flexibility, and dignity)	Was the information about the assistance (for example registration, type of assistance and timing) clear to you and provided in timely manner?	assistance
		Was the assistance provided to those who needed it the most?	EquityAll
		Do you know of anyone who has received more or less assistance than they were entitled to?	NoEquity
		Have you felt safe while receiving assistance, participating in activities or speaking with staff?	Safety
		Did the assistance create any tension or disagreement within your family?	FamilySafety
		Did the programme/assistance create any tension or disagreement within the community?	SafetyCommunity
		Is the information you receive about support for WASH goods and services clear?	ServiceInfo
		The variety in goods and services available to our household were sufficient to have a choice and serve your needs?	choice
		Was there a choice of suppliers for your goods and services near to where you live?	SupplierChoice
		For the programmes you were included in which statement fits best your households opinion?	helpassistance
		How easy was it to obtain goods and services, supported in the programme after you received the assistance?	obtain
		Please tell us what you and your household think of the following statement: ___ "Throughout the process of obtaining goods and services to face our hardship, we were made felt worthy of the support, honoured and respected within the whole process"	respect
2.2	Proportion of targeted population satisfied with the availability of essential/critical WASH goods and services	Which of the following statement fits best the experience of your household: ___ When I needed them, WASH goods and services were ... ... not available ... available	availability2
		When the WASH goods and services where both available and needed it was ... ... very difficult to get them ... neither difficult nor easy to get them .... very easy to get them	difficulty
2.3	Proportion of targeted population who are satisfied with affordability of essential/ critical WASH goods and services	Was the assistance you received sufficient to enable you to purchase WASH goods/services you needed?	PurchaseService
		Did your household managed to save some money thanks to the assistance?	SaveMoney
		Please tell us what you and your household think about the following statement: __ "The WASH goods and services which my household needs (and RECEIVED support for) are affordable to us."	affordability
		Please tell us what you and your household think about the following statement: __ "The WASH goods and service which my household needs (and DID NOT RECEIVE any support for) are affordable to us."	affordability2
2.4	Proportion of targeted population who are satisfied with quality of essential/critical WASH goods and services	The goods and services that your household could acquire are.	quality

2.5	Average duration of unavailability of essential/critical WASH goods or services	For which of the following WASH goods/services did you get support?	WashAssistance
		For which of the following WASH goods/services data is collected?	NOAssistance
		Over last 14 days, have there been any interruption of water supply?	WaterAvailabilityHH
		How may days in total was water unavailable over the past two week?	DurationWaterUnavailableHH
		Over last 14 days, have there been any items/services that you needed but were not available due to lack of supply?	SanitAvailabilityHH
		How may days was the (Reference Good or service 01) unavailable over the past two week?	DurationSanRef01UnavHH
		How may days was the (Reference Good or service 02) unavailable over the past two week?	DurationSanRef02UnavHH
		How may days was the (Reference Good or service 03) unavailable over the past two week?	DurationSanRef03UnavHH
		Over last 14 days, have there been any items that you needed but were not available due to lack of supply?	NFIAvailabilityHH
		How may days was the (Reference Good or service 01) unavailable over the past two week?	DurationNFIRef01UnavHH
		How may days was the (Reference Good or service 02) unavailable over the past two week?	DurationNFIRef02UnavHH
		How may days was the (Reference Good or service 03) unavailable over the past two week?	DurationNFIRef03UnavHH
2.6	Price fluctuations of critical/essential WASH goods & services	Has the level of competition between traders in this area, influenced the prices since the programme started?	PriceChange
		Do you maintain the same prices for your goods and services?	StablePrices
		Name the 3 most important factors, which according to you determine the price of WASH goods & service in your area?	ReasonPrices
		Name of WASH good or service business is supplying:	namewash
		Is (NAME OF WASH GOOD/SERVICE) available in your shop today?	washavailableinshop
		How many (NAME OF WASH GOOD/SERVICE) are available in your shop today?	quantityinshop
		What is the unit of sale for (WASH GOOD/SERVICE)?	UnitOfSale
		How many (WASH GOOD/SERVICE) do you have in stocks today?	stocks
		What is the price per unit of (WASH GOOD/SERVICE) in your shop today? [specify currency!]	price
		Report period to which this data relates to:	ReportPeriod
		Suppliers Unique Identification (UID) as used within the project	SupplierUID

3	Market recovery and development		SurveyCTO Variable
3.1	Proportion of supported traders and service providers with access to funding	Did participation in the programme help your business to secure credit?	Credit
		Do you have at this moment a reliable source of credit if your business would need it?	CreditSource
3.2	Proportion of traders/ suppliers whose trade in essential /critical WASH goods and services, recovered after the event(s)	Are you at this moment able to source all of the necessary supplies, services and materials for your business?	SuppliesAvailable
		At this moment, can you supply all people who turn to you for WASH goods / services?	Supply
		Has demand for WASH goods and services changed since the support by the programme in this area?	Demand
		Did the number of your customers coming to your business changed since the programme started?	CostumerChange
		Compared with time before the crisis, how is your business doing now?	BusinessComparison
		If you compare with the time before the crisis (or programme commence), has your business revenue changed?	IncomeChange
3.3	Proportion of supported traders and service providers who provide quality goods and services	Do you supply water as agreed with implementing partner?	WaterProvisionAgreed
		Verify and check if they comply with SPHERE or other agreed standards?	WaterDeliveryObservation
		Do you provide Sanitation goods/service as agreed with implementing partner?	SanitationProvisionAgreed
		Verify goods/services and check if they comply with SPHERE or other agreed standards?	SanitationObservation
		Do you provide non-food items (NFIs) as agreed with implementing partner?	NFIprovisionAgreed
		Verify goods and check if they comply with SPHERE or other agreed standards?	NFIObservation
3.4	Proportion of (supported) traders and service providers who report benefiting from market support activities	Is or Was the Support You Received Suitable for the Needs of Your Business?	SuitableAssistance
		Has or Had the Support you Received an Effect on Your Business?	EffectAssistance
		Was the support received enough to return or maintain your business operational?	AmountOfSupport
		Due to support my business received BEFORE the crisis, I ... ... can face changes in the market a) better than b) same as c) less than before crisis	FaceChangeBefore
		Due to support my business received DURING and/or AFTER the crisis, I ... ... can face changes in the market a) better than b) same as c) less than before crisis	FaceChangeAfter

4	**Efficiency-of-delivery**		**SurveyCTO Variable**[13]
4.1	Cost per beneficiary	Actual Programme Cost to 'Date' in U$D	ActualProgrammeCost
		Number of "direct" beneficiaries:	DirectBeneficiaries
		Number of Indirect Beneficiaries:	IndirectBeneficiaries
4.2	Delivery cost ratio	Total of the Cash Transfer component (in cash, vouchers, kind or other forms) to Date in U$D	CashTransComp
		Actual Programme Cost to 'Date' in U$D	ActualProgrammeCost

ANNEX 3: METHODS OF MEASUREMENT

3.1 HOUSEHOLD SURVEYS

Household surveys are a data collection method in which information is collected from homes where people live. This is done by interviewing one or more persons at each home that represent the household. Household survey uses interviewer administered questionnaires in which the interviewer visits each household. When not all households can be visited a sample method can be used to reduce the number of households to visit. Key is that the selection of the sample is representative for the larger population to get accurate results.

Advantages:

- Household surveys are common as they allow for very standardised ways of data collecting.
- People are familiar with their use
- Most people live in households so the population is largely covered in a household survey
- People are usually at ease to be interviewed at home
- A large number of households in surveys allows for precise results.

Limitations:

- Respondent needs to be at home for interview
- Need to be willing to respond on sometimes sensitive issues
- Respondent at the household might not be representative for the whole household
- Respondent might not recall accurately past experiences
- Questions might not be clear or in an unfamiliar language
- Respondent might not be familiar with the topic and its related concepts

Many of the limitations can be mitigated by a proper training of survey staff and testing (or piloting) of the questionnaire before their use.

UNSTAT provides a good manual on household surveys "Household Sample Surveys in Developing and Transition Countries" covering theory and practice:

http://unstats.un.org/unsd/hhsurveys

Examples of households surveys by the Centre of Disease Control for Water safety plans:

www.cdc.gov/nceh/ehs/gwash/Publications/Guide_Conducting_Household_Surveys_for_Water_Safety_Plans.pdf

3.2 FOCUS GROUP DISCUSSION

A focus group discussion is a good way to gather together people from similar backgrounds or experiences to discuss a specific topic of interest[12]. It is a mean to collect qualitative data, or data that is descriptive in nature, rather than data that can be measured and subjected to mathematical and statistical analysis[13].

Focus groups can vary in size, but many experts suggest the group should optimally consist of 10 to 12 people. The group of participants is guided by a moderator (or group facilitator) who introduces topics for discussion and helps the group to participate in a lively and natural discussion amongst themselves. A typical focus group session will last between one and two hours.

Focus groups are a useful method to[14]:

- investigate complex behaviour
- discover how different groups think and feel about a topic and why they hold certain opinions
- identify changes in behaviour
- investigate the use, effectiveness and usefulness of particular library collections and services
- verify or clarify the results from surveys
- suggest potential solutions to problems identified
- inform decision-making, strategic planning and resource allocation
- to add a human dimension to impersonal data
- to deepen understanding and explain statistical data.

The main advantages:	The main disadvantages:
• they are useful to obtain detailed information about personal and group feelings, perceptions and opinions • they can save time and money compared to individual interviews • they can provide a broader range of information • they offer the opportunity to seek clarification • they provide useful material eg quotes for public relations publication and presentations	• there can be disagreements and irrelevant discussion which distract from the main focus • they can be hard to control and manage (require some experience) • they can to tricky to analyse • they can be difficult to encourage a range of people to participate • some participants may find a focus group situation intimidating or off-putting; participants may feel under pressure to agree with the dominant view • as they are self-selecting, they may not be representative of non-users.

3.3 SEMI-STRUCTURED INTERVIEWS

This method can be used to collect data from traders.

A semi-structured interview is a method of research used in the social sciences. While a structured interview has a rigorous set of questions which does not allow one to divert, a semi-structured interview is open, allowing new ideas to be brought up during the interview as a result of what the interviewee says. The interviewer in a semi-structured interview generally has a framework of themes to be explored[15].

[12] www.odi.org/publications/5695-focus-group-discussion
[13] www.evalued.bcu.ac.uk/tutorial/4b.htm
[14] Adopted from and http://study.com/academy/lesson/focus-groups-definition-advantages-disadvantages.html
[15] https://en.wikipedia.org/wiki/Semi-structured_interview

However, the specific topic or topics that the interviewer wants to explore during the interview should usually be thought about well in advance (especially during interviews for research projects). It is generally beneficial for interviewers to have an interview guide prepared, which is an informal grouping of topics and questions that the interviewer can ask in different ways for different participants. Interview guides help researchers to focus an interview on the topics at hand without constraining them to a particular format. This freedom can help interviewers to tailor their questions to the interview context/ situation, and to the people they are interviewing.

Usual steps in conducting semi-structured interviews include (Harrell and Bradley, 2009):

- Frame the research,
- Sampling
- Designing questions and probes
- Developing the protocol
- Preparing for the interview
- Conducting the interview
- Capturing the data

3.4 REVIEW OF SECONDARY DATA SOURCES[16]

Secondary data analysis is the analysis of data or information that was either gathered by someone else or for some other purpose than the one currently being considered, or often a combination of the two. If secondary research and data analysis is undertaken with care and diligence, it can provide a cost-effective way of gaining a broad understanding of research questions.

Secondary data is also helpful in designing subsequent primary research or can provide a baseline with which to compare primary data collection results. Therefore, it is always wise to begin any research activity with a review of the secondary data. Secondary data sources include government documents, official statistics, technical reports, scholarly journals, trade journals, review articles, reference books, research institutions, universities, libraries, library search engines, computerized databases, the world wide web etc.

Questions to consider when evaluating secondary data quality:

- Is source credible?
- What methods were used?
- Is the information up-of-date?
- Who is intended audience?
- Is the document's coverage of the topic area broad or too narrow?
- Is it a primary or secondary source? If it is a secondary source, does it accurately cover and report on the primary sources?
- Does the author provide references for the data and information reported?
- Do the numbers make sense? Are they the numbers you want – cases versus percentages? When compared to related data are the measures somewhat consistent?

For tips on collecting, reviewing, and analysing secondary data, please see:
https://cyfar.org/sites/default/files/McCaston,%202005.pdf

[16] Adopted from https://cyfar.org/sites/default/files/McCaston,%202005.pdf

3.5 MARKET MONITORING[17]

Prices, availability and stock levels of essential WASH NFIs is collected weekly within the first month after the intervention, and later once a month to enable tracking of prices over time. The data will be used to assess the programme's impact on supply, demand and pricing in the market system. Example of the tool for data collection are presented in below.

EXAMPLE OF THE PAPER-BASED MARKET MONITORING FORM

Questionnaire Number	
Date	
Time at the beginning of the interview	
1.1 Name of data collector	
1.2 Name of trader interviewed	
1.3 Trader contact phone number	
Location of Shop	
1.4 Village / Town	
1.5 District	
1.6 Region	
1.7 Shop type (code) (Codes: 1 = kiosk, 2 = retailer, 3 = wholesaler)	
1.8 Name of the market	
1.9 NGO	

No	Item	Quantity	Available (yes=1, no=0)	Stock (pcs)	Price/item
1					
2					
3					
4					
5					
6					
7					

[17] Market monitoring form is added to Supplier Survey in SurveyCTO (as a repeating group of questions). SurveyCTO forms are available at https://oxfam.app.box.com/s/pxiugvjfqhpz7kluh1iyqkubn672c3gh

3.6 OBSERVATIONS

Observation is the process enabling researchers to learn about the activities of the people under study in the natural setting through observing and participating in those activities. It can also provide the context for development of sampling guidelines and interview guides. Observations can be done before, during or after conducting interviews but during the household or traders visit. Surveyor can observe:

- Presence, quality and hygiene of sanitation facilities for male and female, as well as presence of handwashing place and MHM facilities,
- If sanitation facilities fulfil Sphere standards related to safety, distance to dwelling and environmental safety,
- If beneficiaries use toilets/latrines instead of open defecation,
- If sanitation facilities and handwashing place is accessible for all, with emphasis if there is an access for people with physical disability,
- Wiping material and baby excreta are disposed of safely,
- If soap (or soap alternative) and water is present together at a handwashing place,
- Handwashing practice with soap and water at any or specific critical event (after using toilet, before the meal).

ANNEX 4: GUIDANCE FOR SURVEY DESIGN

4.1 DIRECT AND INDIRECT BENEFICIARIES

INTRODUCTION

Establishing the **absolute number of beneficiaries** in crisis situations is challenging in comparison with determining the **proportion (e.g. %) of the population**[18] fulfilling a given criteria.

To establish a population proportion one can take a sample of the population and determine the proportion of the sample that fulfils a certain criteria. Then infer that with some margin of error, the same proportion is valid for the whole population. This means that determining the proportion of a population can be assessed without knowing the absolute number of people in the population. Moreover and contrary to what people often sense even the sample size is independent of the population size in relatively large population.

Absolute population figures are usually obtained through civil registration of vital events or vital statistics (See Wikipedia). The United Nations Population Fund (UNFPA) recommends these figures to be checked every 10 years by a census (See Wikipedia) in countries where vital statistics might be less reliable. Methods using remote sensing (Henderson & Xia 1997) or used from population biology (Bostoen et.al. 2007) might be used were such data is not available, not reliable or not relevant (due to e.g. a crisis). However, these methods are not always easy to implement and fall outside the scope of programme monitoring.

This all to show that finding absolute population or beneficiary figures is not a trivial matter. Because of the disproportionate cost and effort of getting accurate beneficiary numbers organisations rely often on estimates. Estimates lead often to large and contested figures in particular for secondary beneficiaries. To avoid that, in this document we suggest a relative simple and practical approach for estimating beneficiaries for programmes which include cash transfers.

DEFINING BENEFICIARIES

Programmes often distinguish between direct (or targeted) and indirect beneficiaries. These definition can change between projects and will also vary depending of project purpose. Definitions expressing programmatic ambitions often differ from the measurable definitions used for practical monitoring. This is to avoid that programmatic ambitions are limited to measurable targets.

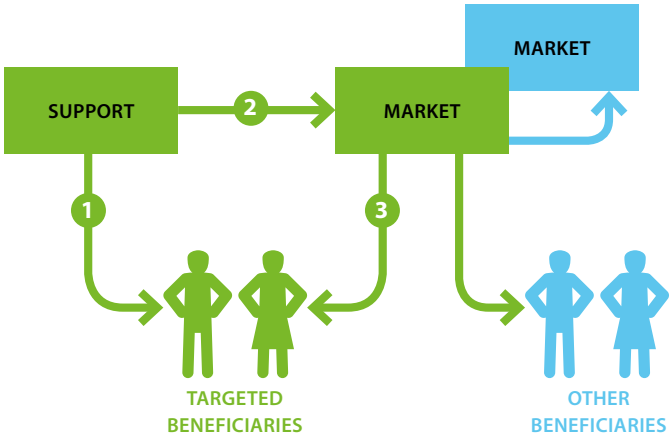
Direct beneficiaries in this document will be defined as those defined by programme as directly benefiting from project-funded activities, while **indirect beneficiaries** are those who also benefit as a result of improvements made to serve the direct beneficiaries. Although this classification may seem clear, different organisations can have different views regarding who is considered direct or indirect beneficiary.

A WASH installation can benefit a small number of users directly, but a market strengthening action directed towards a regulatory change (for example) could have a benefit to a much large number of people directly or indirectly.

The similar case is with MBPs because, while the activities are often at the market level and not directly towards the client within that market system, they are indirectly benefiting. MBP intervention aims at supporting the "traditional" primary (or targeted) beneficiary (as end user of the product or the activity - see flow ① in Figure 1 below), through activities that support the market. So it reaches end user indirectly through market support (flow ② and ③).

[18] Population here is used in its statistical sense as the union of all basic sampling units of interest which can be people, families, but also cars, institution or anything of interest.

Figure 1: Direct and indirect beneficiaries in MBPs



The **direct beneficiaries** remain the "traditional" primary beneficiary who need the products even though the flow of products is guaranteed through a market based approach as shown the flow ② in the figure above. While the market also receives this direct support, it should be seen also as means to provide goods to the targeted end-beneficiaries. Obviously the traders are also direct beneficiaries but their number will be smaller than the number of end user and so they can, in terms of numbers often be ignored.

The **indirect beneficiaries** are those that benefit from the project within the market system or even within the population, but are not directly targeted by the programme (drawn in orange color in the figure above). There are two effects related to complicate with this definition:

1 The mass-effect, best know from immunisation in which the whole population benefit from immunisation if the vaccination coverage is above a certain level. Market based programmes are based on the idea of a similar wider benefit, but is not clear yet if there is such a clear measurable effect as in vaccination.

2 The multiplier effect (See Wikipedia) or the factor that describes the volume or size of the indirect economic activities that are made possible due to the direct market support. These are based on a Keynesian consumption model.

Estimating secondary beneficiaries using these effects is challenging and more an academic activity. The method below describe a practical approach of estimating direct and indirect beneficiaries, which can be used for different situations.

METHOD

As this document covers projects with a cash transfer component for NFIs we will assume all the direct beneficiaries receive the cash transfers. The other people buying similar objects as covered by the cash transfer but not recipients of a cash transfer are considered indirect beneficiaries.

The way to measure this is to:

- Go to all or, if there too many, a randomly selected number of shops for some consecutive days after the cash transfer,
- Register each person that buys a NFI which was part of the WASH basket used to determine the size of the cash transfer.
- Register for each of the people buying whether they received a cash transfer.
- Calculate the ratio of indirect beneficiaries to the number of beneficiaries.

A calculated example:

Data is collected from seven shops (shops 1-7) for three days (Day 1–3) as shown in the table below. For each day, each purchase of a WASH NFI' included in the programme is noted down and the fact that the buyer is included or not ('in' or 'out') of the cash transfer programme. The data can be collected by a surveyor or the trader him- or herself. The data can be grouped in the way as shown below.

Table 1: Data as collected in seven shops over three days

	Day 1		Day 2		Day 3		**Sub totals**	
CT prg.	in	out	in	out	in	out	in	out
Shop 1	9	31	12	23	12	17	33	71
Shop 2	7	25	15	26	13	21	35	72
Shop 3	13	18	9	30	11	24	33	72
Shop 4	14	18	15	25	10	29	39	72
Shop 5	15	18	17	30	9	33	41	81
Shop 6	7	29	17	17	13	18	37	64
Shop 7	8	31	17	27	14	24	39	82
Totals	73	170	102	178	82	166	**257**	**514**

For the calculation the line totals for 'in' and 'out' are calculated by adding the day values together. The sum of the line totals are then added together to obtain the totals over the three days and the seven shops. In the example it is 771 (257+514) shoppers bought WASH related NFIs part of the basket of supported products. Of the 771 roughly one third was part of the programme while two third was not, or for each person in the programme there are two beneficiaries (who also use the supported store) that are not part of the programme.

Imagine that the programme does cash disbursement of 3257 Households with and average household size of 4.6 people.

The direct beneficiaries are: 3257 X 4.6 = 14,982 people.

The indirect beneficiaries are: 14982 X (514 /257) = 29,964 people

The total number of beneficiaries is: 14982 + 29964 = 44,946 people

4.2 SAMPLING METHODS

This Annex outlines the possible sampling design and sampling methodology to be employed. Whilst it is important to use the same indicators in the various surveys so they are comparable, it is not necessary that identical sampling methods are used. What is important is that sample taken is **representative** for the overall population[19]. When a sample is taken and analysed the conclusions for the sample are assumed for the whole population it represented. This process is called statistical inference. The steps in sections below explain some of the possible methods to determine sample sizes.

DETERMINE BASIC SAMPLING UNIT AND THE TARGET POPULATION[20]

For the generic indicator households surveys are used which makes households the smallest unit of interest or the basic sampling unit[21]. To monitor performance over time in a comparative way the overall population and the population groups need to be clearly defined. For example when talking about an urban area it often not clear where the urban area stop and the peri-urban or rural areas starts. For comparison over time it is important that the same populations are used, which can be done by using streets, rivers and other physical boundaries to clearly delimit the area of interest.

SELECTING SAMPLE DESIGN

To explain why sample **size** is not the most crucial aspect in obtaining a representative sample we explain below the difference between accuracy and precision in statistics.

[19] Population is used in its statistical sense of the grouping of all the basic sampling units which for UWSS are mainly households

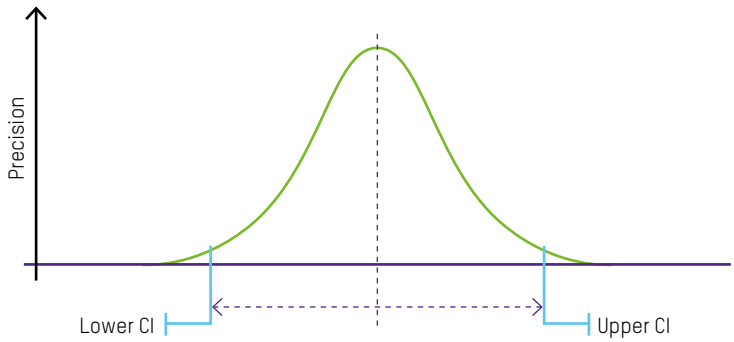
[20] Population is here used in its statistical sense of the group of all basic sampling units

[21] To calculate population figures it is good to collect the population size as well in the survey

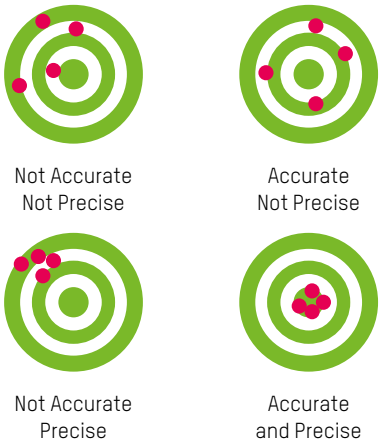
ACCURACY VERSUS PRECISION

The accuracy of a value is the degree to which the result of the measurement, calculation, or specification, conforms to the correct value or standard. In this case it means, for example, seeing how good the true water coverage is in comparison to the coverage measured in a survey. However in our survey the true accuracy can not be measured, but we can determine how well the accuracy is likely to be.

Precision is the extent to which we would obtain the same result if we repeated our measure as shown in Figure above. Precision is expressed in confidence intervals (CI), which give the probability of the measured value as shown below.



Ideally one seeks an accurate and precise estimate. Contrary to popular belief, small confidence intervals are no guarantee of an accurate estimate as is shown below. One can have small confidence intervals for an inaccurate measure.



While precision can be calculated from the dataset based on the sampling strategy, accuracy can not be calculated.

In short, accuracy is determined by how representative the sample is for the whole population, or how likely every person or household could have been selected. This is solely determined by the way the data is collected. Precision relates to the sample size and the sample design.

A simple example: If you have a bathroom scale which does not measure your correct weight but each time you stand on it, it displays the same weight, your measure is precise, but not accurate.

To put it simply:

Data collection process → Accuracy
Sample size → Precision

SIMPLE RANDOM SAMPLING (SRS)

Simple Random Sampling (SRS) is the basis of all probability sampling. Each member of the population has an equal and known chance of being selected. This minimises bias and simplifies analysis of results. The variance or uncertainty between individual results within the sample is a good indicator of variance in the overall population, which makes it relatively easy to estimate the accuracy of results. When there are very large populations, it is often difficult or impossible to identify every member of the population to ensure an equal and known probability of selection, so the pool of selected subjects risks becoming biased.

To obtain a simple random household sample a list of households has to be made and from this list a number of households randomly selected. There are various formulas for calculating the required sample size. These formulas require knowledge of the variance, proportion of the measure of interest in the population and the maximum acceptable error. To avoid having to use (and understand) these formulas Krejcie & Morgan (1970)[22] put the values in a table. The confidence level of 95%, used very commonly in research, is sufficient. For programmes that want to achieve a substantial change a degree of precision of 10% will suffice. When change is little a lower percentage or higher precision might be required. As a rule of thumb take a precision no lower than half of the change you expect in your programme. For instance, if the programme expect that 20% or more people will take up a improved sanitation take 20% / 2 = 10% as your degree of precision. In the table the sample size for a population of 10,000 and precision of 10% is 95.

[22] Tables are made for finite population and proportional errors

Required Sample Size

Confidence = 95%

Population size	Degree of precision or margin of error			
	10%	5%	2.5%	1%
10	9	10	10	10
20	17	19	20	20
30	23	28	29	30
50	33	44	48	50
75	42	63	72	74
100	49	80	94	99
150	59	108	137	148
200	65	132	177	196
250	70	152	215	244
300	73	169	251	291
400	78	196	318	384
500	81	217	377	475
600	83	234	432	565
700	85	248	481	653
800	86	260	526	739
900	87	269	568	823
1,000	88	278	606	906
1,200	89	291	674	1067
1,500	90	306	759	1297
2,000	92	322	869	1655
2,500	93	333	952	1984
3,500	93	346	1068	2565
5,000	94	357	1176	3288
7,500	95	365	1275	4211
10,000	95	370	1332	4899
25,000	96	378	1448	6939
50,000	96	381	1491	8056
75,000	96	382	1506	8514
100,000	96	383	1513	8762
250,000	96	384	1527	9248
500,000	96	384	1532	9423
1,000,000	96	384	1534	9512
2,500,000	96	384	1536	9567
10,000,000	96	384	1536	9594
100,000,000	96	384	1537	9603
264,000,000	96	384	1537	9603

Source: monitoring(4)change 2015, adapted from Krejcie & Morga, 1970.

Example for the calculation using the table above for a given population:

In an area with an estimated 13,783 people and 3,838 household a household survey is planned. The survey serves as a baseline to measure an increase in the number of households with access to critical WASH service. The ambition is to increase the number of households with access from 20% to 25% points. The sampling unit for a possible survey will be the household. This means that the population[23][size for the example is 3,838 households. In the table we look at the first column with population sizes and find either 3500 or 5000. The minimum improvement expected is 20%, which divided in two as a rule of thumb makes 10% precision.

Looking in the table we can see that for a population of 3500 and a precision of 10% the sample should be 93 while for a population of 5000 and a precision of 10% the sample size is 94. From the two figures take the highest as the sample size to be selected.

4.3 LIKERT-TYPE SCALES

A Likert-type scale is a psychometric scale commonly used for scaling responses in survey questionnaires. It is often used interchangeably with rating scale, even though the two are not synonymous. The scale is named after its inventor, psychologist Rensis Likert and uses a format in which responses are scored along a range as means of capturing variations. When responding to a Likert item, respondents specify their level of agreement or disagreement on a symmetric agree-disagree scale for a series of statements. Thus, the range captures the intensity of their feelings for a given item and helps to convert qualitative information into quantitative.

While the scale is ordinal not each step can be considered of the same value so it is difficult to give values to each step as was often done in the past.

For the WASH MBP M&E framework we consider this method for several indicators.

WITHIN A COMPOSITE INDICATOR

If the indicator has three conditions that need fulfilling e.g.:

1 CONDITION A

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
☐	■	☐	☐	☐

2 CONDITION B

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
☐	☐	■	☐	☐

3 CONDITION C

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
☐	☐	☐	■	☐

The overall response is the lowest most right answer of the three questions

[23] Population is used here as defined in statistical terms as the count of all basic sampling units

PERCENTAGES OF MULTIPLE ANSWERS TO ONE INDICATOR

Calculation example.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
73 HH	32 HH	42 HH	15 HH	27 HH
$\frac{73}{73+32+42+15+27}$ =39%	$\frac{32}{73+32+42+15+27}$ =17%	$\frac{42}{73+32+42+1}$ =22%	$\frac{15}{73+32+42+15+27}$ =8%	$\frac{27}{73+32+42+15+27}$ =14%
If the base line was as below				
37%	13%	25%	8%	17%
The difference between the follow up measurement and the baseline becomes				
39-37=+2%	17-13=+4%	22-25= -3%	8-8=0%	14-17=-3%
Total of Agree		Neither	Total of Disagree	
+6%		-3%	-3%	

MEDIAN ANSWER OF MULTIPLE ANSWERS

The median is the value separating the higher half of a series of values from the lower half. In simple terms, it may be thought of as the "middle" value of a data set. So if the indicator is collected at three household that provide a reply then the middle category would be the value "Neither Agree or Disagree" as household A has one value higher and household C has one value lower.

HOUSEHOLD A

☐ Strongly Agree ■ Agree ☐ Neither Agree or Disagree ☐ Disagree ☐ Strongly Disagree

HOUSEHOLD B

☐ Strongly Agree ☐ Agree ■ Neither Agree or Disagree ☐ Disagree ☐ Strongly Disagree

HOUSEHOLD C

☐ Strongly Agree ☐ Agree ☐ Neither Agree or Disagree ■ Disagree ☐ Strongly Disagree

If an extra household D would have a value as below:

HOUSEHOLD D

☐ Strongly Agree ☐ Agree ☐ Neither Agree or Disagree ■ Disagree ☐ Strongly Disagree

The middle value could be either "Neither Agree or Disagree" or "Disagree" as both could be considered middle values. For the WASH M&E framework the lowest (most to the right) value will be taken in such cases, so the median becomes "Disagree"

When there are many values as in the case of the measurement above we look in which the 50% value falls. So using the same example we get ...

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
73 HH	32 HH	42 HH	15 HH	27 HH
39%	17%	22%	8%	14%
0–39%	39–56%	56–78%	78–86%	86–100%

The middle value or 50% value is in the agree category so the median value is "Agree".

For the baseline used above the values are:

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
37%	13%	25%	8%	17%
0–37%	37–50%	50–75%	75–83%	83–100%

Again the 50% value is the middle value but in case of doubt between "Agree" or "Neither Agree or Disagree" we choose by convention the lowest value so in this case the median value goes from "Neither Agree or Disagree" in the baseline to "Agree" in a follow up measurement.

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