Global WASH Cluster

Guide to Capacity Mapping and Assessment of WASH Emergency Response at the Country Level

30 July 2008

Written by John Cosgrave

Table of Contents

Cover Photograph: Children collecting water from a tanker in Iraq in 2003.

Introduction:

This guidebook is the product of the Global WASH Cluster's capacity building mapping project. This is one of a series of initiatives to assist the WASH cluster to better meet the needs of affected populations in emergency responses. The tools developed under this project are intended to:

- Assess the capacity of WASH actors to respond to emergencies.
- Identify capacity gaps to allow the development of a capacity building plan for the sector.
- Collate key WASH data in advance of emergencies to:
    - Identify any likely WASH related vulnerability in the case of an emergency response.
    - Accelerate the need assessment process by the prior assembly of baseline date for particular areas and thereby speed up the design of the response.
- Support the collaborative identification of WASH vulnerabilities, capacity gaps and capacity building needs..

What is in this guidebook:

This guidebook is intended to help you to identify capacity gaps for emergency response in the water, sanitation, and hygiene (WASH) sector. It details how to use three of the five tools developed for this purpose[1].

The guide is meant to be used by groups of WASH actors to help identify what aspects of their capacity they should focus their efforts to improve their emergency response capacity. The WASH actors can be organised either as a WASH Cluster or as another type of WASH group.

WASH Group: a grouping of agencies working in water, sanitation, or hygiene. The can be organised as a formal WASH Cluster or just as a grouping of the main agencies dealing with water, sanitation, and hygiene in a country or part of it.

This guidebook sets out a simple approach to approach that can be used in a wide variety of context to identify priority areas for action so as to improve WASH actor performance in emergencies. The different steps of the approach are described with examples from different countries and tips on how to manage the process.

Two key principles for the process are that:

[1] A fourth tool, for emergency capacity assessment is covered in the WASH emergency capacity tool guide. The fifth tool was a survey of gaps in global WASH capacity. The results of this survey are detailed in a separate report.

- The process is more important than the particular products (like the background data tool).
- The process is collaborative, joint, and participative. The best quality emergency responses in WASH or any other sector happen when there is an existing collaboration between the members of the sector.

There is a separate tool and guide for mapping the WASH capacity during an emergency. This tool, together with a guide on how to use it, can also be found on the WASH website.

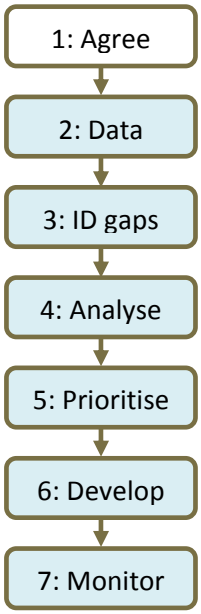
We use different types of text boxes to highlight different materials in this guide:

Definition box: These boxes provide definitions of the different terms used.

Example box: Provides an example based on the author's experience or on the validation of the WASH capacity tools

Tip boxes provide tips for carrying out the different parts of the process. These include suggestions about how you can organise particular activities or use particular techniques.

Step 1: Getting agreement on the process?



The very first step in the whole process is getting the agreement of the WASH group on doing this process. It is essential that everyone is on board from the beginning as it is much easier to get agreement on action if everyone has been involved in the planning.

The first step is a very important one, and one worth taking some time over, as it is far easier to get buy-in at the start, then trying to get it half way through the process. You may need to vary the approach suggested here as it may not suit your particular context.

When you broach the subject you may face a series of questions from other Group members including:

- Why do capacity assessment?
- How are we going to do it?
- What resources is it going to take?
- How often are we going to do this?

Why do capacity assessment?

Why do capacity assessment for emergencies? Has this got any real use or is it just an academic exercise? Isn't this just a paper exercise? These are just some of the questions, either spoken or unspoken, that you may face from other members of the WASH group when you begin this exercise.

Doing capacity assessment in an emergency response is quite straightforward - you are simply asking where the biggest gaps are and what management action you can take to try and address them.

Capacity assessment prior to an emergency could be an academic exercise, but what is presented in this guide is not just a process for identifying capacity issues, but a process that presents a possible approach to addressing those capacity issues.

> *It is 7pm. You are just about to leave the office where you have been putting the final touches to a proposal that has to be in HQ by start of business tomorrow. You get a phone call. A colleague in the west of the country tells you that there has been a major disaster involving tens of thousands of people and that they need assistance with water, sanitation, and hygiene…*

What happens next depends on how well you know the different actors in the sector and their capacities. An emergency is not a good time for finding this out for the first time. The whole emphasis of the approach set out in this guide it to find out this information before you need to do so for an emergency

response. The approach should also help the whole WASH group to identify areas where they need to improve capacity for dealing with such emergencies.

Essentially the approach set out here is part of Emergency Preparedness. Preparedness consists of activities and measures taken in advance to ensure effective response to the impact of disaster.

Emergency Preparedness: Activities and measures taken in advance to ensure effective response to the impact of disaster.

The objective of this guide is to help you identify capacity limits in the WASH sector that the WASH Group can target for action to reduce the risk of death and suffering in the next emergency response.

Preparedness pays. In the 2006 Yogyakarta Earthquake, a survey of the affected population found that the best performing local authority, in the view of the affected population was in Sleman. This authority was better prepared than the others because of preparations for a possible eruption from Mount Merpati. 97% of the population of Sleman got assistance with water within 24 hours against 43% to 61% in less-prepared local authority areas.

In Indonesia, emergency preparedness translated in faster assistance for the affected population and greater satisfaction with the assistance received. There are times when the slow assistance can lead to death and suffering.

Preparedness has the following advantages:

- Responses can be faster because those involved already know what they need to do within their own role.
- Response can be better organised, because no time is wasted establishing who is going to do what.
- Response can be of a better quality as good preparedness helps to ensure that the right materials are ready for the response.

Preparedness also leads to lower stress levels for those responding as many of the traditional sources of stress, such as the lack of role clarity and the high numbers of decisions to be made can be reduced.

Tip: Sometimes people argue that preparedness is futile, and that what is important is flexibility in the response. Ask if anyone can remember any response locally where preparedness made a difference. You may be able to pick an example from your own experience - farmers keeping seeds away from damp and rats, for example. Ask if the office caught on fire, would they prefer the fire-brigade to have done their training before hand, or just learn how to fight fires when they are fighting the office fire.

How are we going to do it?

This guide sets out the process. The steps in the process are shown below. The sections of this guide follow the six steps set out below, including the special tools developed for some of the steps. Again, you may feel that you need to change this process in some way to better suit your context.

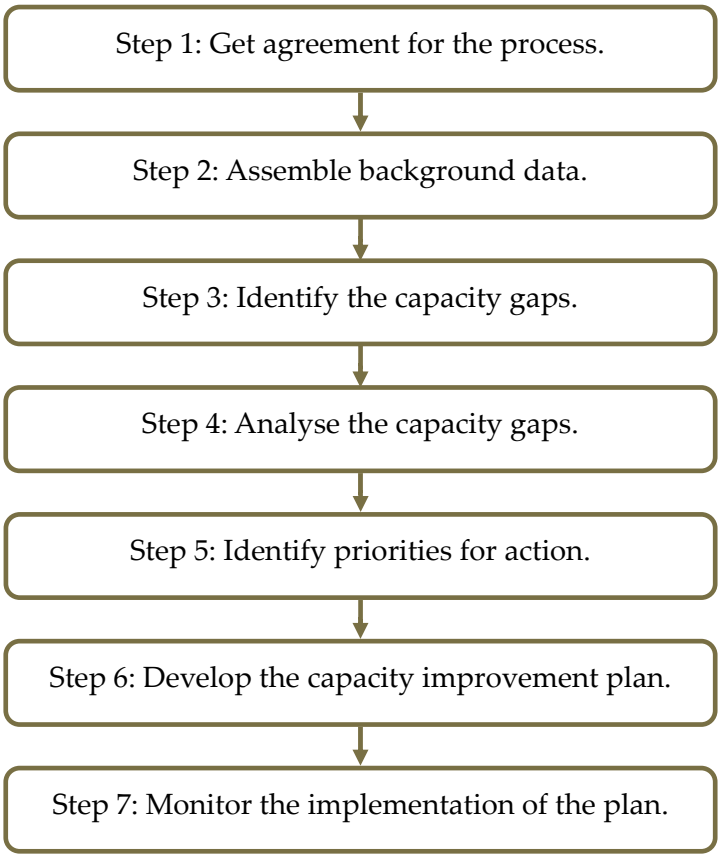


Figure 1: The seven steps in the capacity assessment process

What resources is it going to take?

This is a good question. When we began developing this approach we planned a high level of participation by the WASH group with many workshops. However, we soon found that it was not realistic to expect the WASH group to give so much time for what was, in many cases, only one small part of their overall responsibilities.

Instead we developed a model where the group collectively takes the major decisions, but passes the detailed work to an experienced local consultant. This approach enables the WASH group to control the process, but reduces the work load for the WASH group. You may opt for a different approach. What is important here is that, as far as possible, the consultant is seen as 'neutral' and is selected by the WASH group as a whole rather than one agency.

The methods and resource implications for each of the steps is outlined in the following table:

Step	Activity	Method	Resources
1	Get agreement for the process	Proposal at WASH Group meeting.	Some preparatory research to answer possible objections
2	Assemble background data	Data collected and collated by consultant with oversight by WASH group. Workshops to address overall issues	Selection of consultant. Consultant for 20 to 30 days (depending on complexity of WASH sector). Time at WASH group meetings to agree on zones. Meeting time to review consultant report. Time to fill individual agency capacity assessments. Workshop to review sector capacity.
3	Identify the capacity gaps	Workshop to conduct: a) contingency planning or b) an exercise or c) an after-action review	Facilitator for chosen approach. Time for agencies to participate in contingency planning, an exercise, or an after action review.
4	Analyse the capacity gaps	Workshop to analyse cause of gaps.	Facilitator for workshop. Individual agencies may need to do their own analysis.
5	Identify the priorities for action	Workshop to identify priorities (may be combined with gap analysis workshop). Individual agency analysis	Facilitator for workshop. Individual agencies may need to do their own analysis.
6	Develop the capacity improvement plan	Individual agency planning followed by broader workshop	Some agency planning and a half day workshop. There should be some time for individual agency planning between the priority identification and the planning workshops
7	Monitor the implementation of the plan	Attentions to the plan targets at regular wash meetings	Time at WASH group meetings

Table 1: Suggested methods and resources for the seven steps

How often are we going to do this?

WASH group member may be anxious about the work-load implicit in the whole process, and will want to know how often they process is to be repeated. Looking at the whole process as a cycle it can be seen that WASH capacity assessment is linked into the emergency preparedness and response cycle for the WASH sector.

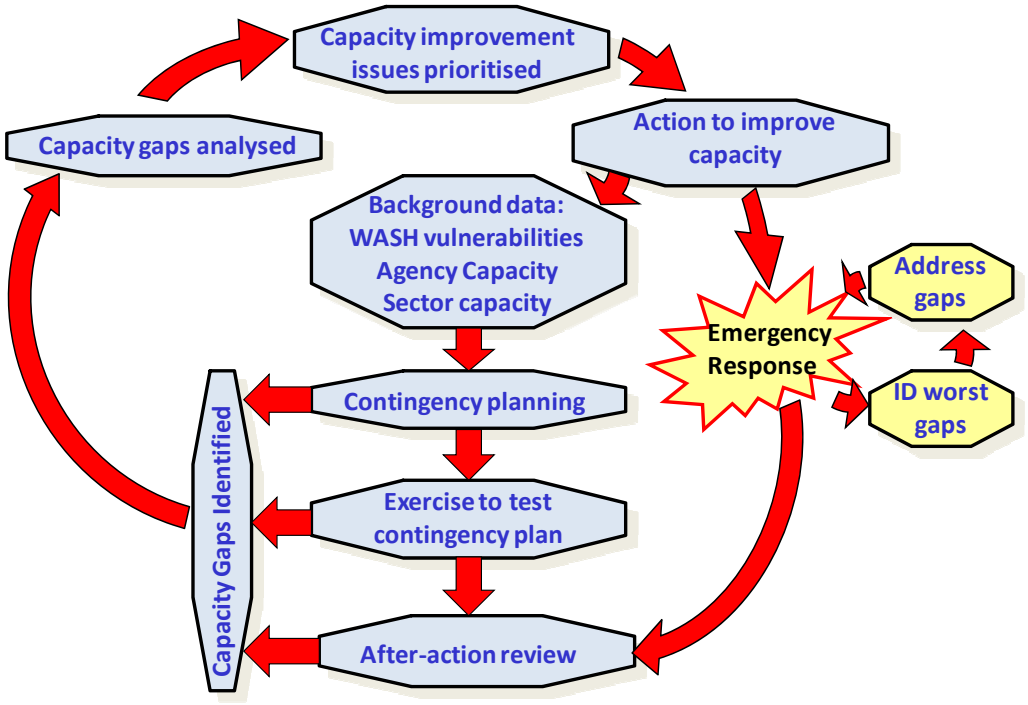


Figure 2: WASH group Preparedness Planning Cycle

However, different aspects of preparedness planning have different intervals. Aspects like WASH vulnerabilities change only very slowly, so you may need to address these only every five or ten years, depending on the rate of economic and social change. However, change may happen more quickly in countries undergoing complex or chronic emergencies, or areas undergoing rapid urbanisation, leading to the need to update background data more frequently.

Agency capacity can change very rapidly, and sector capacity more slowly, so perhaps it is worth looking at these on an annual basis. Contingency planning may need to be done when new hazards emerge or there is a major change in vulnerability.

In 2008 several countries saw riots over the price of food and of fuel. What had happened is that there was a major swing in the terms of trade for basic foods and for fuel, putting enormous pressure on those who could barely make ends meet as it was. This became a new factor to be included in contingency plans in several countries.

Obviously after-action reviews can only take place after an emergency response or an exercise. This gives us a table of when different elements of the process need to be repeated:

Aspect of preparedness	How often should it be done or reviewed
Background data on wash vulnerabilities.	Reviewed every three to five years depending on the rate of economic and social change. Major revision every ten years. More frequent revisions in complex emergencies or situations of rapid change.
Contingency plan	Reviewed annually, or whenever there is major change in the hazards or vulnerability.
Agency Capacity	Annually or after every exercise or emergency response.
Sector Capacity	Every two years or after every exercise or emergency response.
After-action review	After every emergency response or every exercise to test contingency plans.
Exercise to test contingency plan	A desk exercise annually with a more thorough exercise every few years.
Identify capacity gaps	After every planning activity, exercise, or emergency response.

How to begin

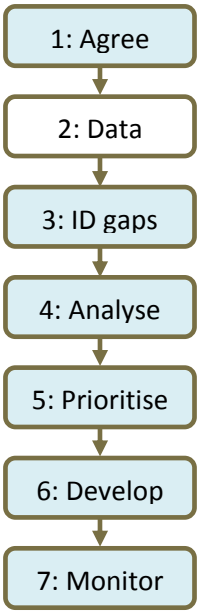
You can find an introductory presentation that presents the process in Appendix A: The introductory presentation. This presents the tools and gives a brief history of the process.

Summary

The main element of the first step is that you need to ensure that everyone who would have a role in the WASH response participates in the process. This includes the Government, water authorities, public health agencies, national and international NGOs, the Red Cross movement and others. It may also be good to have some donor involvement if issues of resourcing are likely to arise.

Getting everyone to participate is a critical first step, and it is worth delaying the whole process some time, or investing some resources in preliminary planning, to achieve this.

Step 2 - Identify the background data



This section is based around the background data tool which is available as a separate spreadsheet file. There is more information on the content of this tool in Appendix B: Notes on the background data tool.

What are background vulnerabilities?

The WASH vulnerability of any population to an emergency will depend on their practices, knowledge, and habits as well as the context of the water supply, sanitation, and hygiene environment, and their socio-economic situation.

In 1991, a camp north of Luanda in Angola held two groups who had been displaced by the conflict. One group consisted largely of women and children as the men were in the military. This group had had almost no access to education and have very little knowledge of hygiene. They drew water from the same place that they bathed.

The other group were refugees before being further displaced. They had high rates of literacy and had good knowledge of hygiene, being careful to take water from above their bathing site, and to boil water before use. They had suffered no deaths in the previous two months while the first group had seen several deaths per week.

The background vulnerabilities are the vulnerability that any population face due to their existing water, sanitation, and hygiene context, or the vulnerability that they face due to the difference between their normal context and the context that they face in an emergency

In Mozambique people in a displaced camp preferred to drink water from unsanitary wells than treated water from the camp system. They preferred the taste of the water from the wells as it was similar to the slightly brackish water they normally drank.

As in this case, displacement may pose many problems for sanitation, especially if displacement leads to people being crowded into camps.

In Pakistan in 2001 there was a problem with Afghan male refugees defecating in small ravines in the camp rather than in the latrines. If people live on isolated farms, then going to the toilet in the bush may not present a major health risk. However, if the same population are displaced to a camp where everyone is crowded together than the same behaviour will pose a serious health risk.

Hygiene practices may also pose major challenges after an emergency. People may not have the necessary hygiene knowledge for their new context.

Why is the background situation important to us?

The background situation of any population tells us how vulnerable they may be to the changes that an emergency can bring. If people are used to using large amounts of water, then they may be ill-prepared for have to cope with a new situation where they have little water. Similarly if they have low knowledge of hygiene then they may be more at risk in a changed environment.

> *In Kosovo in 1999, returning families were very worried that their wells had been polluted with dead animals or worse as had happened in previous conflicts. Many agencies scrambled to provide well cleaning services to deal with this issue. However, if agencies had understood the water-supply context better they could have ordered the equipment needed for well cleaning in advance.*
>
> *However, once the wells were cleaned people did not drink from them as they did not like the idea that a dead animal had been inside it. This illustrates that the background data has to capture attitudes as well as concrete facts.*

We need to know about the background vulnerabilities and capacities so that we can make sensible plans for emergency preparedness and response.

The link with needs assessment and response

Identifying the WASH vulnerabilities also helps us to deal with the persistent problem of needs assessment in emergencies. Whenever we respond to an emergency, we need good information in order to make sensible plans on four elements:

- The nature of the emergency, and the problems it is likely to provoke.
- The nature and capacities of the affected population.
- The nature of the response to the emergency.
- The extent of the emergency.

These four elements can be represented as an emergency context tetrahedron.

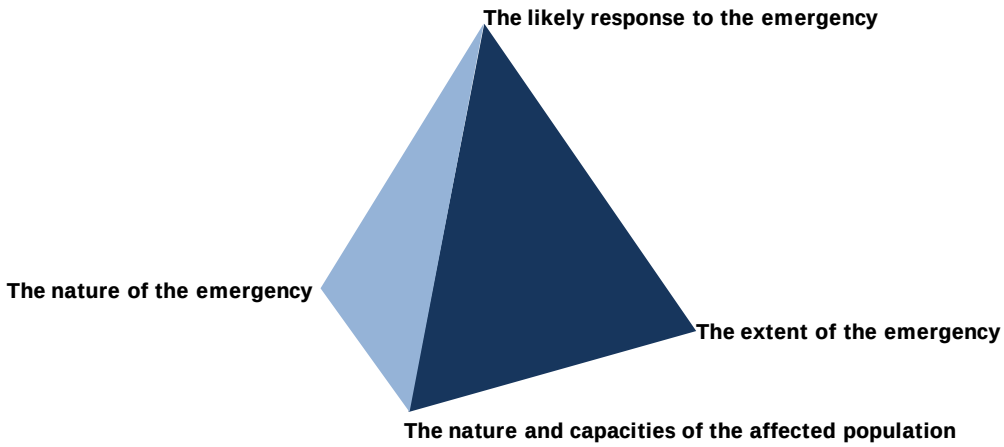


Figure 3: The emergency context tetrahedron.

It is common in an emergency that there is a humanitarian need for agencies to act quickly to save lives and to prevent suffering. There may also be a political need for donors to be seen to act quickly. However, good quality needs assessment take time, and the more time that is available the better the potential quality of the assessment. The only way to deal with this paradox is to assemble as much of the needed information before any emergency occurs,

How can we identify the background situation?

Originally it was foreseen that the WASH group as a whole would identify the background vulnerabilities. However it was soon recognised that this placed a very large workload on the WASH group and that a more efficient approach would be to have a consultant or one member of the WASH group assemble the background data under the supervision of the WASH group.

The procedure is as follows:

- The consultant assembling background data in a draft report
- The consultant suggesting a possible distribution of WASH Zones.
- The WASH group discussing and agreeing the zones
- The consultant preparing both the background data tool and a report summarising the background data.

A major part of this tool is based around the ideal of WASH zones.

WASH zone: A geographical area with broadly similar water, sanitation, and hygiene characteristics.

Dividing the country up into a number of WASH themed blocks makes planning simpler. Zoning is an aid to rapid assessment. Knowing what the principle features of the zone a response needs to be mounted in already gives you good information on what WASH conditions you are likely to meet there.

Zones are a short way of describing the predominant WASH conditions in different areas of the country. There are three main factors to consider:

- Water supply – typical sources, abstraction, treatment, storage, reliability, transport and distribution mechanisms
- Sanitation – what sanitation system is typically used.
- Hygiene practices – what WASH related hygiene practices are typically used including such issues as anal cleansing.

It is relatively easy to have a very complex zone map (think of any geological map that reflects the underlying geology of an area) whereas we want a simpler overview that is more useful for planning purposes.

Zones are used as a simple way of aggregating complex data to make it easier to plan responses. The zoning exercise also gives the WASH cluster a hook around which they can discuss the complex question of WASH vulnerability. The idea is to get members of the WASH Cluster thinking about these vulnerabilities not in terms of their own specialism, but as a compound of all elements of the WASH triangle of water, sanitation, and hygiene.

The zoning exercise can also help to ensure that WASH cluster members are aware of major information sources in the country on WASH. Because of the high rates of turnover in the sector, it is quite common to find that international agency staff may not be aware of reports detailing water-resources etc in country that are a few years old. They may also be unaware of resources such as key individuals or data sources.

Zone selection procedure

While this process will probably be carried out by your consultant, it is useful for the wash group to review and discuss the zones to see if they make sense to them and to familiarise themselves with some of the background data.

Zones should follow existing administrative boundaries, but it is recognised that you can have differences within different districts due to whether an area within a district:

- Is formally developed (concrete city) or informally developed (peri-urban areas)
- Has a different hazard pattern (e.g. drought rather than floods).
- Lies along the sea or water courses.
- Has a different geology from the rest of the district.
- Has a different ethnic composition from the rest of the district.

One of the reasons for using existing administrative areas is that it is much simple to get data for these, than for new areas. Another is that it is less complicated to plot the zone on a GIS map.

One approach is to start with a map and to indicate the main water supply

type zones - in terms of deep boreholes, surface water, springs, or shallow wells. Of course, you may know all the zones so well already that no map is needed.

The idea is not to prepare a detailed map, but a general zoning of the principle supply systems. Sometimes a zone may include two types such as surface water along watercourses and shallow wells away from watercourses. This is an iterative process and you may decide to reset the zones after working through all the questions. There is no one right answer to this, the zonal map is just a tool to help you identify how the major WASH vulnerabilities may vary across the country.

Figure 4: Map showing the WASH characteristics of sub-divisions.

The best approach to building you zone (developed during the West Bengal validation) is probably to:

1. Put up a map of the whole country or area that you are working on with the next level of administrative boundaries (provinces or districts, depen*ding on what the next administrative level is called) marked.*
2. Identify the typical water, sanitation, and hygiene situation in each of these sub-divisions (Figure 4).
3. Mark these on the map and then consider how the different administrative sub-divisions should be combined to make the zones .

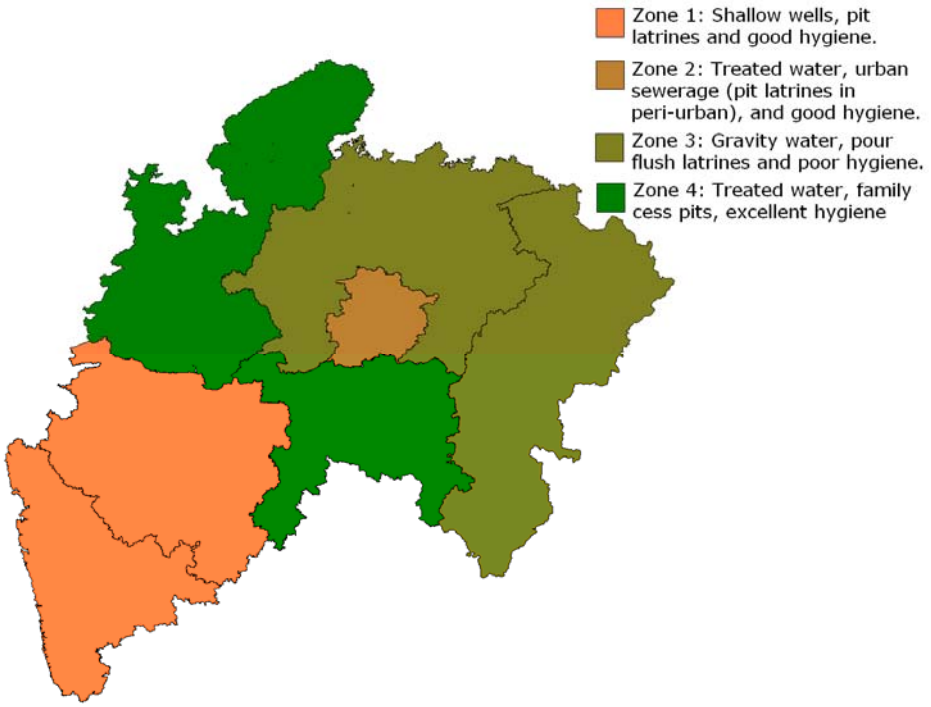


Figure 5: Basic zone map showing 4 WASH zones

Typically you will find that urban and peri-urban areas are distinct zones. Remember that the zones are simply a way of grouping areas with similar WASH profiles to make WASH planning easier. The zones are not intended to have uniform WASH characteristics across the zones. There is no one best zoning for any country, there are a number of different potential zoning layouts.

Outputs from the background data process

The background data process has two outputs. The first is the filled background data spreadsheet, some guidance for filling this is presented in an annexe. The second output is the background data report that contains not only all the data for the zones presented in the spreadsheet, but also the underlying data (e.g. data by province) from which the zone data is

constructed. The following is a suggest layout for the WASH Background Data Report.

- Introduction: Setting out why and when the report was written (and who wrote it).
- Zoning: Setting out the WASH zones and the logic underlying the suggested zoning.
- Basic zone data, including the zone data and hazard profile. The hazard profile should indicate the severity and frequency of different hazards in the zones. Details on how to fill the Hazard profile are given in Appendix B: Notes on the background data tool.
- Water data. While each zone may be represented as having a particular average level of consumption, the background data report should present a more complete picture of the variability in the different zones. Official figures may need to be overlaid with a picture of the real situation.
- Sanitation data. This is often more difficult to obtain than water data and this is where using an experienced consultant will prove useful. Again, official data may have to be modulated by the real situation.

Official figures may not give the full picture

In one country, an urban area was reported as having an improved water supply (piped water in this case). However, it soon transpired that water was only available for one hour per day.

In another county the official figure for improved latrine coverage was very high, but a survey found that a large percentage of latrines were in a state of collapse and disused.

- Hygiene data including personal hygiene data. This is usually the hardest data to find, and your consultant may be forced to extrapolate from small scale surveys.
- Resources, including:
    - A bibliography of the sources used for developing the background data report,
    - A list of key resource people and institutions similar to the list on the excel spreadsheet for the tool.
    - A list of datasets and maps similar to the list in the excel spreadsheet in the tool.
    - A list of internet resources similar to the list in the excel spreadsheet in the tool.

The process

It is assumed that you will either use a consultant, or a member of the WASH group to prepare the report. You have a number of choices as to which part of the process are undertaken by the group as a whole and which are undertaken by the consultant.

The more that the WASH group are going to rely on the consultant, the more experienced the consultant needs to be.

Specification for consultant

Because a good deal of information on the sector is never formally published, it is essential that the consultant is very experienced in the sector and has a good overview of where data might be found. The consultant will typically have at least ten years, if not twenty years, experience of the sector and will have worked on several country-wide WASH surveys. They will typically be nationals of the country, but may be internationals that have specialised in that particular country.

The person will be working in some part of the WASH sector. They will be one of the most experienced WASH consultants in the country, if not the most experience.

They should be familiar with all aspects of the sector and ideally have good knowledge of all surveys and studies of the sector that have been carried out in the last decade.

Where to find such a consultant: Such an experienced consultant may be an academic at the national university or may have their own consultancy business. Typically they will have worked on WASH studies for the World Bank.

Finding the right consultant is well worthwhile, as during the validation process for the tools, WASH groups quickly saw that having a single document with all of the main WASH data would be very useful, not only for emergencies, but also for regular programme planning. Finding the right consultant also means that a far wider range of data can be considered than might be the case with a less-experienced consultant.

Hiring such an experienced consultant may proved administratively difficult because they are likely to have a high daily rate. In this case the consultant could be hired on a lump sum basis to carry out the task, or could be hired through another partner who gets a grant to carry out the task.

It is important that the whole WASH group should have ownership of the process, including the selection and hiring of the consultant. This is why it may be preferable to have a consultant carry out this part of the work rather than a staff member of one of the agencies.

If your own agency has to select the consultant to meet internal financial controls, you can always have the WASH group nominate a pool of three candidates from which the final selection is made.

Another approach is to have a sub-committee of the WASH group select the consultant.

Having a consultant do the initial work

The procedure with a consultant doing the initial work is relatively straightforward. However, this does require a very senior national consultant. If, after presenting the overall process and the tools to the WASH group, if the group decides to begin use a consultant to develop the initial draft of tool you, you then need to agree the recruitment and selection procedure will work. Having group agreement on the recruitment is important as this is the first step in the overall process during which the group will work together a lot.

After the consultant is hired, you need to arrange a meeting during which the consultant can present their draft zoning and the whole group can discuss this. This meeting, early in the process, is to ensure that there is agreement on the draft zoning. This is because zoning has proved to be the most contentious aspect of the background data tool in the past.

The timetable for a 90 minute session would be:

- 20-30 minutes for the consultant to present the zones and the logic behind them.
- 45-55 minutes for general discussion on the zoning.
- 5 minute wrap-up to clarify what has been agreed.

A half day meeting would start with this, but would then go on to consider and add suggestions to the bibliography, key resources persons and institutions, data sets, and internet resources.

The meeting can be a session of about 90 minutes in a regular WASH group meeting, or a special half-day meeting to discuss the zoning and other aspects of the background data.

After this meeting the consultant will research the data to fill tool one prepare

both the filled tool and a report to summarise the data. When this is complete the draft report should be circulated to the WASH group and the group should then meet with the consultant to discuss any issues raised by the draft.

Having the WASH group do the initial work

You would begin the process with a full three-quarter or one day meeting to introduce the process and to begin the zoning.

As in all training events, how you lay out the space has an impact on the dynamic of the workshop.

The bistro style layout is generally good for the workshops around the WASH tools as the groups at the tables can discuss different topics without any time being wasted for breaking-out.

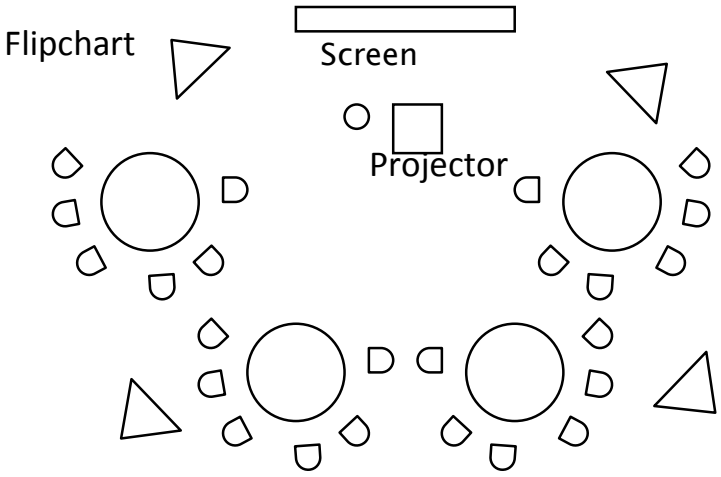


Figure 6: Bistro style training layout

Typically you will have 4 to 7 people per group, although 5 is probably the ideal. Remember that people will tend to sit with people that they know, so before you start doing group-work you will need to reallocated people to groups. One technique is to get people to line up by distance of birthplace from the workshop venue (helps to give groups that are balanced both ethnically and in terms of the presence of non-nationals), by years of experiences (ensures that you have a mixture of experience in each group), or even by the number of brothers and sisters, children, and nieces and nephews that people have (tends to give a good age mix). You can then number off the people along the line for the tables, but it is more fun if you give the groups names (for fruit, or days of the week).

For the zoning exercise you will need large maps with provincial or district outlines so that people can draw up their zones. The simplest way is to print or photocopy the blank maps up to flipchart size (A0 or A1). Alternatively you can use a data projector to project a map on a whiteboard, or an easel and then trace the outlines with a felt pen.

Figure 7: This outline map of West Bengal as drawn from a projected image before being zoned by the workshop participants. The group had also worked initially from smaller A4 versions of the map.

It is also very useful to have the pages from the background data tool reproduced on large scale (A0 or A1 size)[2]. This allows the whole group at any particular table to discuss the answers to the different questions.

Figure 8: Working on a large scale copy of the background data tool at a Workshop

Outline for a one-day workshop on tool one:

09:00 Introduction to the tools and to the day

10:00 Each group begins work on the zoning they propose

10:30 Coffee

11:00 Groups continue to develop their zones for feedback at 12:00 and a plenary discussion on the optimal zoning.

12:30 Lunch

13:00 Group-work on background data for each zone. Each table take a topic (one of the pages from the tool). The groups move from table to table correcting and adding to the work of the other groups.

14:00 Reality check: Do the zones selected make sense in terms of the data in the last session?

14:30 Coffee

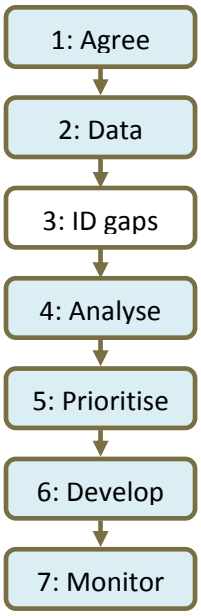
15:00 Group work on the resources for the background data tool, with groups again moving from table to table.

[2] This was a useful innovation introduced by the Unicef ESARO in Kenya.

Whoever is going to research and collate the data for tool one should be present at the workshop so that they understand the logic that motivated the group to do the zoning.

After the workshop the consultant take charge of the process and completes both the spreadsheet and the background data tool. You will find lots of gaps in the background data from the workshop as participants will point out that they don't have the right reference documents to hand. However the point of the workshop is for the WASH group to get experience of working together to familiarise everyone with the contents of the background data tool and report.

This is the first stage of the process, but remember that the overall process is intended not just to improve preparedness but also to move towards the situation where the WASH group can conduct capacity development planning, capacity building, and contingency planning.



Step 3 - Identify the likely gaps:

Agency and sector capacity

As part of the preparation for WASH capacity assessment two tools were prepared, the agency capacity tool (tool two) and the sector capacity tool (tool three). This section describes both of these tools.

Detailed guidance on filling in these tools can be found in Appendix C: Notes on the agency capacity tool and Appendix D: Notes on the sector capacity tool.

The underlying reason for looking at WASH sector capacity is to ensure we are better able to respond in emergencies. The original approached focused on mapping existing capacities and building on this to identify areas of weakness. In order to do this we developed a series of tools for measuring capacity:

- The capacity of different agencies.
- The capacity of the overall WASH cluster, paying particular attention to planning and coordination.

We validated the tools in three country trials: in Nicaragua, in Guinea, and in India. These trials went quite well with many valuable suggestions being made by the participants. Part of the Indian trial (in West Bengal) included looking at how capacity might be mapped at the community level. These country trials highlighted broader problems with our underlying approach:

- We are not really interested in what capacity exists as this is essentially an academic question. We are only interested in assessing capacity as a way of discovering what the gaps are likely to be in an emergency response. What we really want to know is "what action can we take now, so that we face fewer capacity gaps in the event of an emergency".
- Capacity is not static but very dynamic. In the trial of the tools, agency field staff had enormous problems with identifying what staff could be made available for a response to an emergency of a particular scale. It was clear from comments by those filling the tools that the capacities that are made available in any particular response are contingent on a whole range of factors, including the scale and nature of the emergency, management experience and personalities, the time of year, funding availability, and other commitments.

- The demand also varies with the context, making it very difficult to develop capacity rules (like one hygiene mobiliser per 500 people) because this depends on:

    - The background of the affected population. If a population already have good levels of hygiene awareness their need for hygiene promotion may be quite low if their circumstances are unchanged.

    - The stage of the crisis, whether it is at the early onset, or is several months down the line.

    - The present situation of the affected population compared to what they are familiar with. If people are in an unfamiliar environment (such as an IDP camp) they may need to learn new practices.

    - The technology that is used to address the needs.

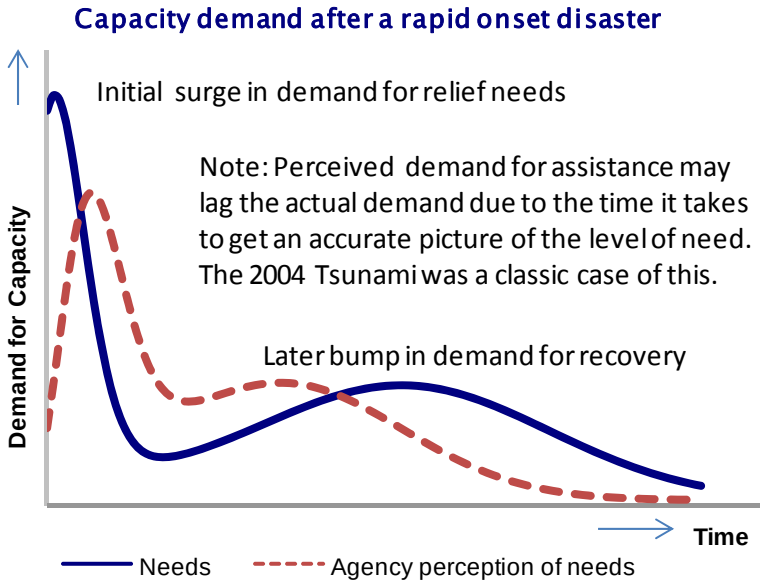


Figure 9: Capacity demand after a rapid onset emergency

- It is almost impossible to establish exactly what capacity would be needed to meet a generic disaster. The demand for capacity in an emergency depends on the level of loss of access to or destruction of existing systems, and the level of displacement. As shown in Figure 9, the pattern of capacity demand peaks rapidly after an emergency, due to the need to establish new systems, or re-establish old ones. Once the initial work of setting-up emergency systems is met, the capacity demand reduces quickly as we move into the support phase. The perception of the need for capacity does not match the actual pattern,

at the start there is an information lag, and later on assistance tends to end prematurely.

Given the problems with establishing abstract levels capacity or needs and estimating gaps from this, it makes more sense to base plans for capacity improvement on capacity gaps in WASH response. In this guide we set out three ways in which we can try to identify gaps in WASH emergency response using:

- Contingency planning for known hazards (where the contingency plans are based on ideal capacities rather than being limited by actual capacities[3]).
- After-action reviews of emergency responses. This is particularly useful where there has been a recent emergency, or emergencies are frequent enough to be able to identify gaps.
- Exercises to test contingency plans.

The gaps identified through these processes then need to be prioritised in terms of their potential impact in comparison with the likely cost, in money, management effort, or time, of addressing the gap.

However, participants judged that both the agency capacity tool and the sector capacity tool were still useful for identifying areas of weakness within individual agencies (as looking at sector gaps only identified overall gaps.) Participant also felt that the sector capacity mapping tool was quite useful for tracking progress on sector issues.

The agency capacity tool

Throughout the validation, the agency capacity tool always proved the most difficult tool to fill, particularly the human resources section. This was even after repeatedly simplifying the tool. However, despite these problems, participants considered that the tool was still useful as it allowed participants to examine the capacity of their own agency rather than just the capacity of the sector as a whole.

The tool consists of a series of pages:

- Wash Staff: Detailing current staffing levels and the proportions of the staff that could be made available for emergencies of different scales.
- Key Stocks: Stocks held by the agency, whether nationally, regionally, internationally or with suppliers.

[3] There are two basic ways of approaching contingency planning. The first of these is based on planning for the best, worst, and most likely scenarios. The second is based on planning for the best use of the available capacity. Clearly only the first approach is likely to identify serious capacity gaps, as the second approach take capacity gaps as given rather than a priority targets for action..

- Finance: The funding for emergencies that is available to the agency.

Financial Preparedness

What financial resources are available for addressing emergencies. These can be either budget provisions, emergency funds, or special funding arrangments.

	Fund Name	Grant or loan	Where held	Size of the fund	Sign off	Days to access	Usage
	Short name for the emergency fund	If the fund available as a grant or a loan, or as a loan that may be turned into a grant?	Where is the fund nominally held (Ministry of Finance, headquarters etc)	How large is the fund (in USD)?	Who has to sign off on the use of the fund	How long does it usually take to access funds, including document preparation etc.	How many times has this fund been used in the last five years
1							
3							
3							
4							
5							
6							

Figure 10: The Finance page of the Agency Capacity Tool.

- Training: WASH training that the agency has organised, managed, provided, or funded.
- Organisational Orientation: Measures the emergency orientation of the agency across five dimensions: focus, emergency unit, support systems, planning, and emergency guidelines.
- People and Institutions: This page asks for the details of key people and institutions to supplement the list in the background data tool.
- Data Sources: This page asks for the details of maps and datasets to supplement the list in the background data tool.
- Internet Resources: This page asks for the details of relevant internet sites to supplement the list in the background data tool.

Full details of the questions in the tool and a guide on how to fill it in can be found in Appendix C: Notes on the agency capacity tool.

Using this tool is a useful preliminary for trying to identify gaps through planning or by testing plans as it reminds everyone of what the agency's actual capacity is.

The sector capacity tool

This tool consists of a three sheets with a number of topics with the overall emergency response environment, the level of planning for emergencies, and the internal working of the wash sector.

> For details on how to use the tool see: Appendix D: Notes on the sector capacity tool.

The approach is to ask for agreement with a descriptive statement of the situation in the sector. This tool proved very successful at provoking discussion on WASH issues.

WASH Planning Aspect	For the aspects on the left which of the following most closely approximates reality? 1	2	3	4	5
Planning environment	Apart from project planning, there is little strategic planning in the WASH sector (because of resource constraints or other reasons)	There is some strategic planning in the WASH sector, but the plans are not realistic in terms of the available resources.	There is good detailed planning for some parts of the WASH sector, but this does not cover the whole country or all sectors	There is a national WASH master plan, but this is not closely monitored	There is a national WASH master plan with realistic targets which are closely monitored.
WASH Contingency planning	There has not been any real contingency planning for WASH aspects of emergencies	Some agencies have developed their own contingency plans for the WASH sector	There has been some contingency planning, but only some of the main actors were involved	We have had WASH sector contingency planning with most of the main actors, but the plan has not been updated	We have had WASH sector contingency planning with most of the main actors, and review the plans every six months
Quality of WASH contingency plans	WASH contingency planning is generic rather than being based on a specific scenario	WASH contingency planning is based on a single scenario	WASH contingency planning is based on a single scenario developed by a hazard mapping exercise	WASH contingency planning is based on multiple scenarios	WASH contingency planning is based on a range of scenarios developed by a hazard mapping exercise
Simulation exercises	We have not had any simulation exercises in the sector	We have held one simulation exercise, but without some of the major players in the sector	We have held one simulation exercise for the sector with almost all the major players	We have held more than one simulation exercise, but the same problems have been repeated	We have had more than one simulation exercise with learning from earlier exercises incorporated in later ones
Disaster Risk Reduction	DRR is not part of the WASH sector activities	Some WASH agencies have done limited work on DRR	The WASH sector as a whole had done some coordinated work on DRR	DRR is an ongoing focus of activities for the WASH sector	DRR is an ongoing focus of activities for the WASH sector and represents a significant percentage of sector expenditure

Figure 11: WASH planning page from the sector capacity tool.

The sector capacity tool is useful for identifying gaps in sectoral coordination, as well as identifying broader issues that can affect emergency response capacity. Some of the gaps identified (a lack of a coherent disaster management structure) will be outside the WASH sector.

It can also be used to track improvement in the sector by using the scoring

section of the sheet as described in the notes on the tool in the appendix.

Identifying gaps through contingency planning scenarios

Contingency Planning is a planning process, in a state of uncertainty, in which scenarios and objectives are agreed, managerial and technical actions defined, and potential response systems put in place in order to prevent, or better respond to, an emergency or critical situation.

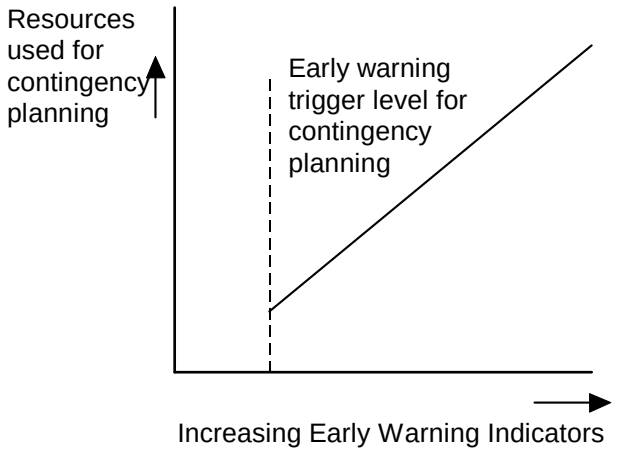
This definition suggests that contingency planning is not just about planning, but in the best of cases leads to putting systems in place to prevent or better respond to emergencies.

The same capacity gaps often impact on a range of different emergencies, so contingency planning exercises or after-action reviews will often identify gaps that while specific to a particular response or hazard, are also more generally applicable.

What is important in contingency planning is the process rather than the plan, In reality the planned-for contingency may never come about but the planning process is still useful.

"Of course, when the emergency happened, it was nothing like what we had planned for. The contingency planning process we had gone through meant that all of the main players already had a clear idea of their respective roles. This, and the relationships built up during the process meant that we already had a functioning team in place to respond to the emergency."

The resources that you should put into contingency planning depend on level of threat that you are facing. Contingency planning may be continuous in a country facing a series of threats, or is may be triggered by a particular level of early warning indicators.



Contingency planning is normally developed around scenarios.

A contingency planning scenario is simply a statement about a possible future event or state, for which the planned action is contingent. The idea is not to identify a plan for each scenario, but a plan that could deal with a range of different scenarios.

Scenarios should only be as detailed as is needed for the planning. Detailed scenarios force a close examination of the underlying issues, but may narrow the focus too much.

You can develop scenarios through a group process. You can have each small group first identify the three most critical disasters hazards e.g. flooding, civil disorder, drought, and then develop scenarios around these for potentially serious events. Not all groups will pick the same three hazards.

Each group can prepare a summary of their scenarios on a flipchart and the whole group can visit the each other's work and vote with prepared strips of post-it note (marked with a letter to prevent the groups voting for themselves). The selection for the criteria is not the most likely scenario, but the most likely scenario that would seriously challenge the WASH sector.

Once you have selected your scenario you need to think what WASH needs are likely to arise in this scenario and how they are likely to be met. From there you need to move to discuss how the WASH sector would respond to the needs. Of course the WASH needs cannot be met by money and materials alone, but may also require personnel resources and action such as agreeing in advance the protocols that would apply in a response.

Divide the participants up into groups. Have one group serve as the affected population and let them make what demands for WASH services on the other group in line with the scenario.

Use the gap between the demands and the services provided to identify gaps in WASH preparedness.

This approach only describes a part of the contingency planning process. You can find further advice on contingency planning in (IASC Sub-Working Group on Preparedness and Contingency Planning, 2007) or (Cosgrave and InterWorks Madison, 2000).

Identifying gaps by testing plans

Testing contingency plans through simulations or exercises is an excellent technique for identifying possible WASH gaps.

Organising an exercise is complex and is likely only to be done for wider contingency plans rather than for a particular sector. There may be an annual national disaster exercise that the WASH sector could use to test their

readiness.

The common features of all such exercises are:

- A control team, which generates the information flow to the players, and may also act as agency international headquarters.
- Players, who usually operate in teams playing the role of particular structures. Each team has its own working space and there are rules about how they can communicate with other teams.
- Role players, such as journalists or beneficiary representatives who also inject information to the players.
- Time compression. One hour of clock time may represent a calendar day, to allow time for the situation to develop.
- A review, such as a quick after-action review, to draw lessons from the exercise.

Exercises take a great deal of preparation. The preparation team needs to prepare a scenario and then decide to what extent the information they provide to the players will be determined by what they do (free play) and how much by the exercise script (scripted play). Role guides need to be developed for anyone playing a role outside of their normal job function.

The players are provided with a description of the assumed context (e.g. tropical cyclone approaching) and are then left to organise their work. The control team regularly provides additional information (called 'injects) to specific players. Depending on their role, players may be required to produce specific documents, such as a list of most urgent needs, or an appeal document, or a logistics plan.

The control team continue to provide more information to text the ability of the players to plan and manage a response. The compressed time places the players under a good deal of pressure (just like a real emergency) and they normally have to work hard as each hours consumes another full day of exercise time.

The review at the end of the exercise provides information about the gaps in WASH service provision.

Identifying gaps through an after-action review

An after-action review is a good tool for identifying gaps in a response. While after-action reviews can range from an informal self-examination to a formal after an event, our focus here is on formal facilitated after-action reviews.

After-action review: a structured discussion of an event the focus on drawing learning from that event. It looks at the divergence between the planned and the actual, and then identifies what went well or ill. The aim of an after-action review is to improve personal and collective performance in the future by identifying lessons from particular events.

After-action reviews can only work if there is full participation by the group in an open, learning atmosphere. The first task for the facilitator it to create the right climate, emphasising that the focus is on learning and that what is said is confidential, in so far as it will not be attributed directly or indirectly to whoever said it. The climate needs to be one of trust and openness.

The four key questions

The four key questions for any humanitarian after action review are:

1. What did we plan? What was expected to happen?

Ask participants to individually cast their minds back to the start of the operation, then ask them to record the plans and expectations of that time briefly on a card.

Ask anyone if they can think of anyone's expectations that are funny in retrospect - such as someone expecting that the operation would be over quickly enough for them to go on holiday. Use humour to break the ice.

Then ask participants to think back to when their expectations first changed in a major way and ask them to put their new expectations on a dated card. Have them do this for two to three changes of expectation and then put the cards on flipchart paper on the walls with a timeline on it

2. What actually occurred?

Have participants in small teams prepare a timeline (or a flowchart if they prefer) for what actually happened. You may need to go back to the plan timeline at this stage.

3. What went well, and why?

First ask what went well - build up a list on a flipchart - then ask why the items on the list went well. This will probably raise other things that went well. Be complimentary about the work of the team.

4. What can be improved, and how?

It can sometimes be difficult to have staff identify this as identifying problems may be seen as a criticism of others. One approach is to ask everyone to write down their rating (out of ten) for the response, and then ask them *"what would have made it a ten for you?"*

List these responses and then use this list to ask why these issues were problems and how they could be improved. Rephrase this as advice for anyone facing a similar situation and see if you have agreement for your reformulation.

The facilitator also needs to specifically identify what gaps occurred in WASH service provision.

These four simple questions comprise the whole of the after-action review. The whole process can take from half a day to a day, given the complexity of the event and the number of participants. It is important that everyone has an opportunity to participate.

In some cultures junior staff may be reluctant to give their ideas in the presence of senior staff in small groups. One approach here is to give everyone five "talk tokens" these can be printed slips of paper, marbles, beans etc.

Whenever any person in the group makes a contribution of up to 30 seconds they have to pay a token into the pot. Once a member has used all their tokens they have to keep silent until all the members have used all their tokens and the tokens are taken from the pot and redistributed. This can help to ensure that junior staff also contribute to the discussion.

Because other ideas will have been triggered during the exercise the facilitator should follow up by checking if any lessons have been overlooked.

Check to see if people have come up with other ideas during the workshop it is a good idea to try and capture these by revisiting the lists and asking people if they would like to make any changes or additions.

The facilitator can also check how the participants view the validity of any lessons generated.

At the end of the workshop, place the lessons that have been generated on flipcharts and then ask everyone to vote for what they regard as the three most important lessons.

The Facilitator

The role of the facilitator is to take the process forward and to maintain the learning nature of the event by avoid detours into self-justification or blame, while able to keep the discussion focused on emerging issues.

The facilitator needs to emphasis the professional and candid nature of the review, and that it is not a complaint session or an evaluation, but concentrates on what the different participants have learned during the operation.

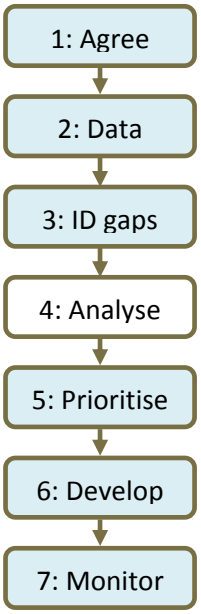
In many cases this learning will not be explicit because people have not had a chance to reflect on it. It is the job of the facilitator to draw this learning out into the open.

The facilitator must have facilitation skills and should ideally be:

- A non-player in the specific activity being reviewed.
- Perceived as independent
- Knowledgeable about the WASH sector so that they understand technical aspects of the discussion.
- Knowledgeable about emergency response, so that they are familiar with any terms used.
- Familiar with the context, so that the understand references by the participants.

USAID has published a useful guide for conducting after-action reviews (USAID, 2006). There is also useful short guidance on the UK's National Library for Health website (Robertson and Brún, 2005).

Step 4 - Analysing the capacity gaps



Once you have identified gaps in emergency WASH response you need to examine them to what the causes are. Two tools for analysing problems that you can use in a workshop setting are the Ishikawa (or fishbone) diagram and the problem tree.

The Ishikawa diagram

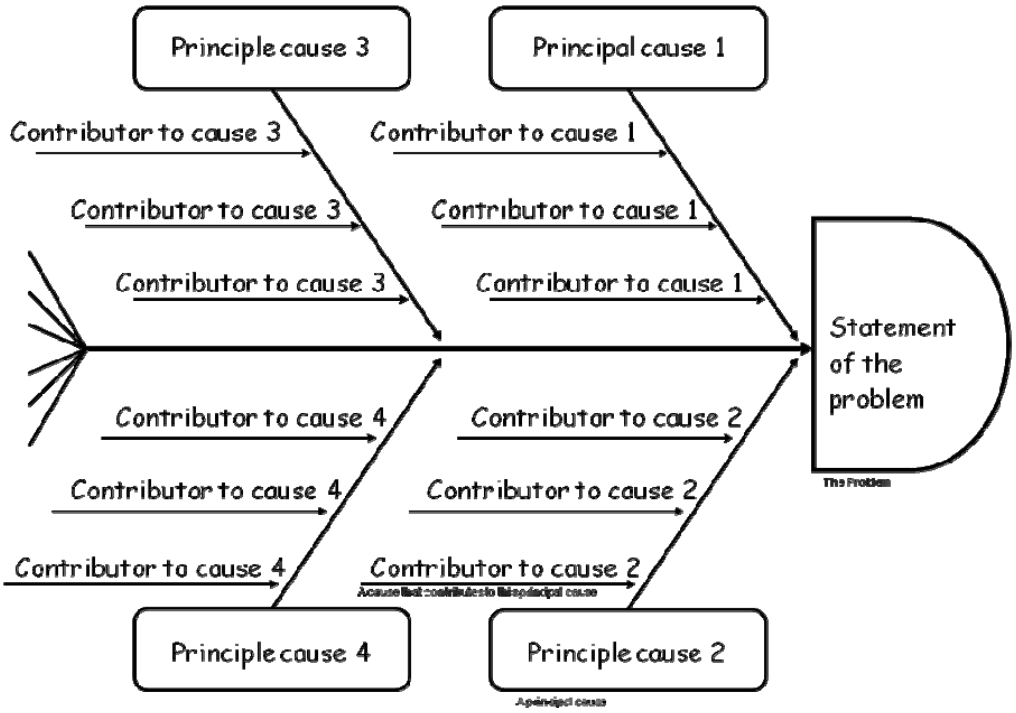


Figure 12; An Ishikawa diagram

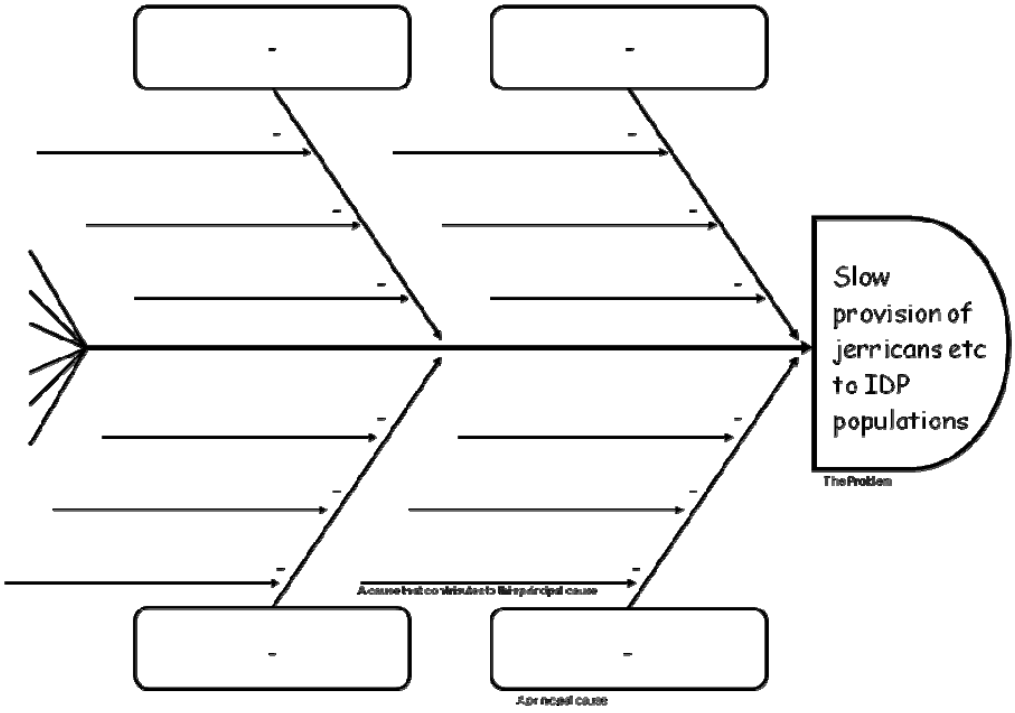
The easiest way to illustrate both of these is with a practical example.

> *You have a large programme in a developing country. Parliamentary elections are very strongly contested and are accompanied by violence. After the elections however, there is a huge surge in violence, much of it based on ethnicity. Large numbers of people are displaced and have to flee their homes, sometimes with only the clothes on their backs.*
>
> *One of the problems identified by the after action review was that it was some three weeks before displaced families got water containers, and that the lack of containers was seen by them as a major problem.*

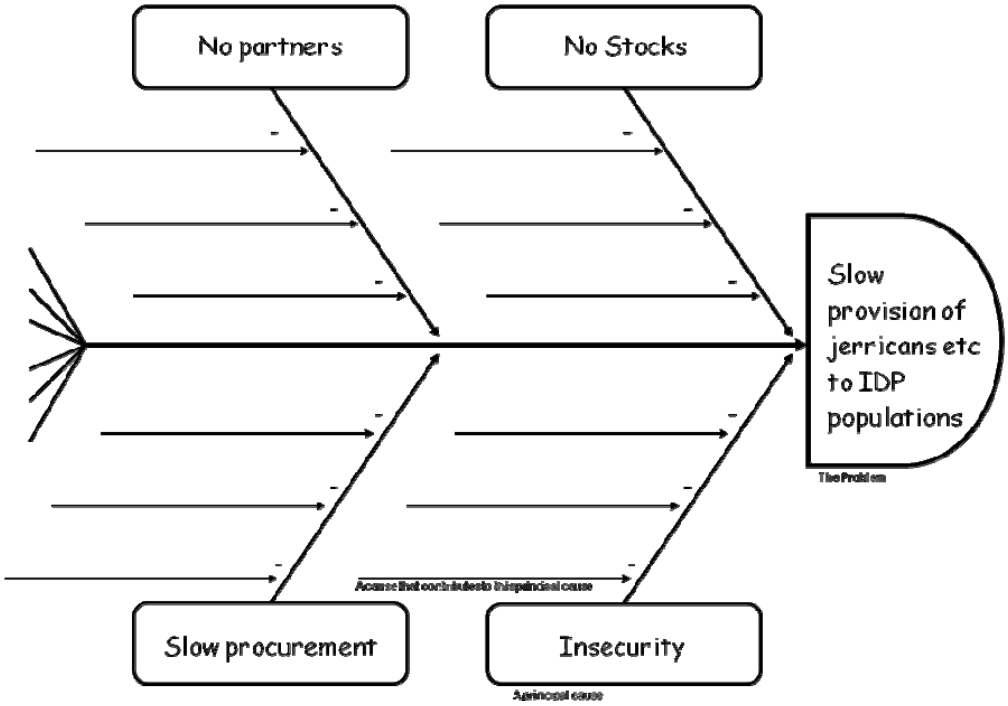
We can fill in the Ishikawa diagram starting with a problem statement, then with the principal cause, and finally the contributory causes. Each of the issues

identified in planning, or in the after action review can become a problem statement, but the number will reduce as some problems will found to be caused partially by other problems identified.

First agree a statement of a particular problem, in this case that it took so long to get jerricans and other wash items to the affected population.



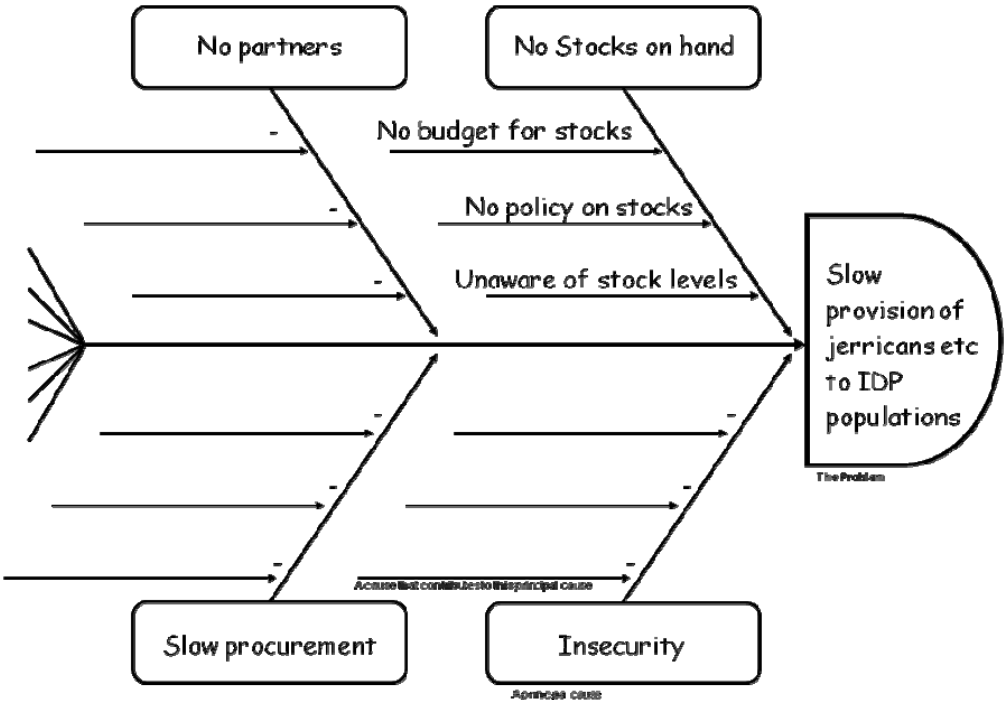
Next, brainstorm with the group to find what the principal causes were.



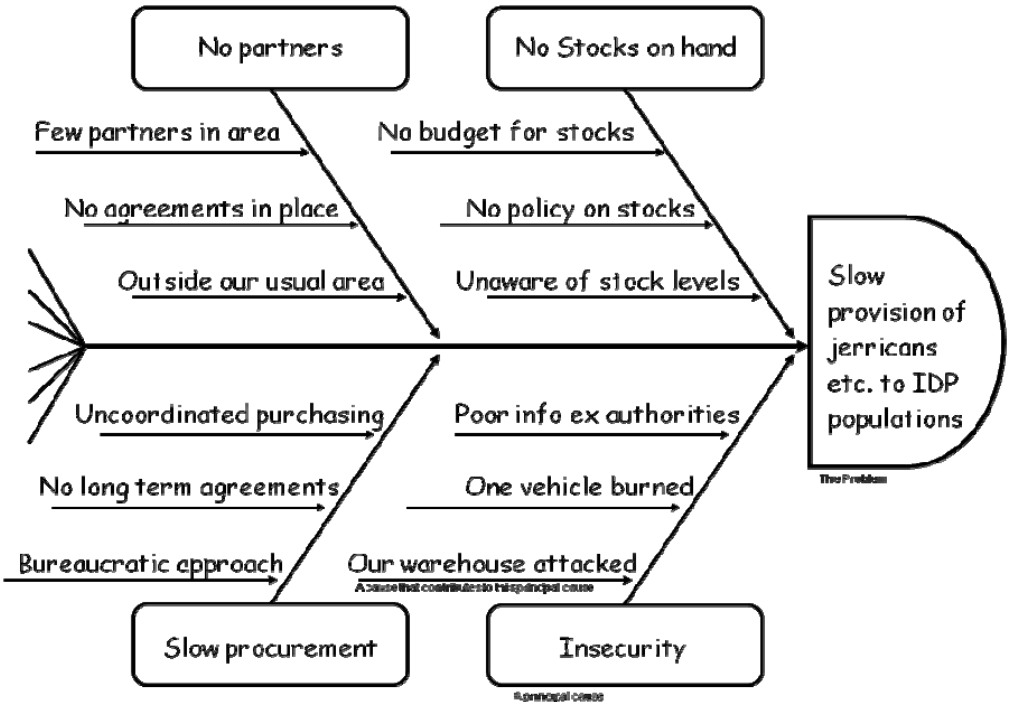
In this case we have identified four principal causes. You might have more or less. The principal causes are the main generic factors that contributed to the problem. In this case insecurity not only prevented needs assessments, but

also made transport of material from the capital difficult.

Now, for each of the principal causes, look at what factors have contributed to them. Taking the case of a lack of stocks, the contributory case are the lack of a budget for buying and maintaining stocks, the lack of a stockholding policy, and a lack of awareness of who held which stocks.



You then carry on the same process for each principle cause. In this example, all of the principal causes have three contributory causes. You might have more or less.



Once you have demonstrated the process for one problem, you can then ask

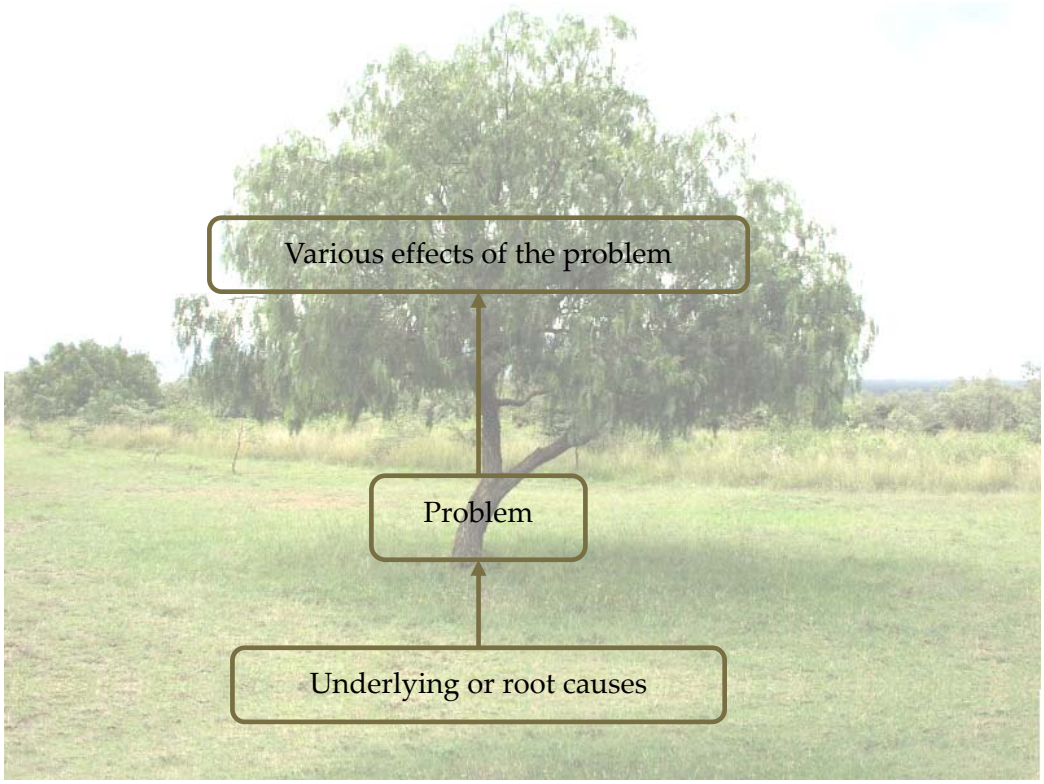
the group to carry out similar analyses on the other gaps identified.

You can give groups blank Ishikawa diagrams (there is one in the appendices) for them to record their analyses of the problems.

Once you have completed the problem analysis, you should make a list of the contributory causes and then see how often the different contributory causes are mentioned. This can help you to develop a list of priority areas.

The problem tree

The problem tree is another tool to help you analyse a problem and to separate if from its causes and effects of the problem it is particularly useful with dealing with very complex multi-factor problems, or where there is some doubt as to where something is key problem or an underlying cause.

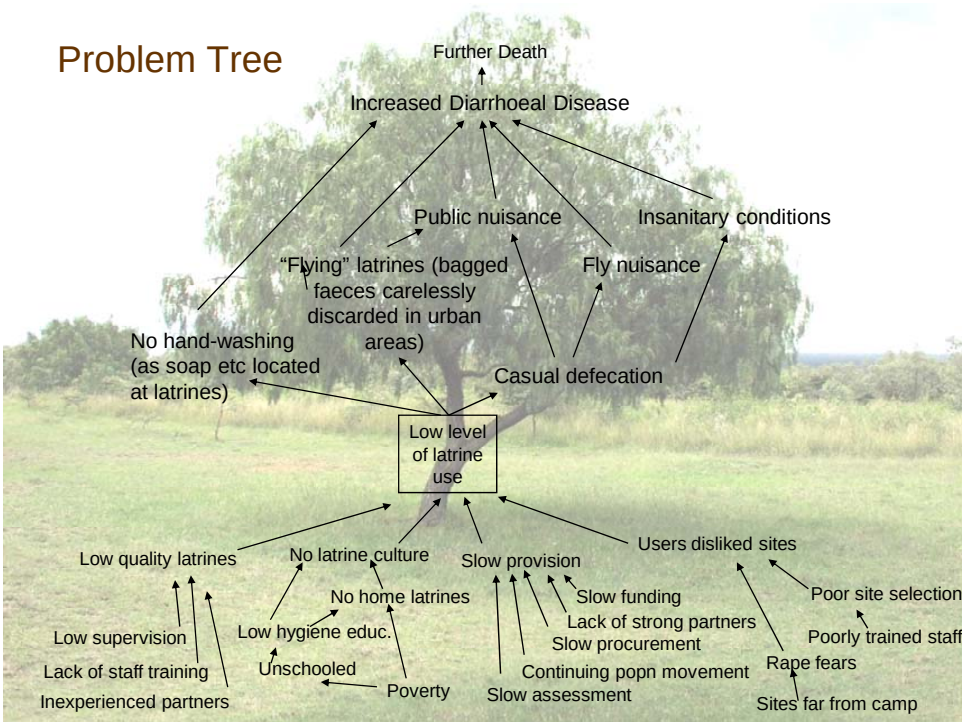


As part of the response to displacement due to post election violence, WASH agencies provided latrines at sites being used by displaced population. Your after-action review highlighted that many latrines built for the IDPs were little used by them.

This is a good problem for using the problem tree as the underlying causes are multifaceted and include both agency performance and community attitudes to latrines.

Constructing a problem tree is a good task for group work. The potential effects of problems will be well known, but it is still useful working through these to illustrate why we are trying to improve the underlying issues.

At a workshop, you could have different groups prepare a problems tree for the same problem and then compare their problem trees with each other and discuss.



Again, you can combine the results of several different problem tree analyses to see what are the main issues.

Step 5 - Identify priorities for action

The problem identification and analysis methods set out in the earlier chapters should have left you with a list of issues to contribute to gaps in WASH sector performance in emergencies.

Issue triage

The first stage is to separate the list of issues into :

1. Issues which fall inside the control of the sector members (for example, stockholding policy or training policy).
2. Issues which fall outside the direct control of the sector member, but which sector members could advocate for (for example, rapid customs clearance for relief items in a declared emergency).
3. Issues which fall outside the control of the sector members and where the issues are so broad that advocacy by the sector would be meaningless (for example, poverty).

The third group of issues can be discarded at this stage for the present exercise.

Impact and ease of action

The second stage is to classify the remaining issues in terms of:

- The likely cost of addressing them
- The likely impact of addressing them

Given that these may be difficult to assess, it is probably enough to divide them into low, medium, and high cost and impact.

Issue	*Possible action*	*Impact*	*Cost*
No agreements in place	Standby agreements	M	L
Outside our usual area	Data on all areas	L	L
Uncoordinated purchasing	Coordinated Proc.	L	H
No Long term agreements	Set up LTA	M	L
No budget for stocks	Set up stocks	H	H
No stockholding policy	Establish Policy	H	L
Poor information ex authorities	Build relationships	M	L
Unaware of stock level	Survey stocks	M	M

This example is illustrative only. Similar measure may have very different likely costs and impacts in you contexts.

These can then be represented in a matrix such as the following:

	High cost	Medium Cost	Low Cost
High impact	Set up stocks		Establish stockholding policy
Medium Impact		Survey stocks	Standby agreements Build relationships with local government Set up long term agreements with suppliers
Low impact	Coordinated procurement		Gather data on all areas

Obviously the highest priority should then be given to low cost, high impact measures.

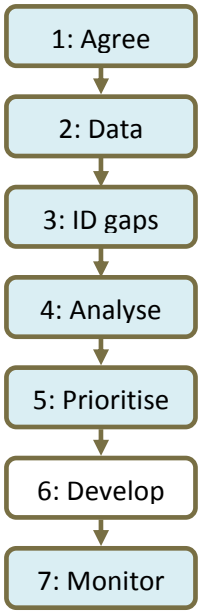
	High cost	Medium Cost	Low Cost
High impact	3rd Priority	2nd Priority	1st Priority
Medium Impact	4th priority	3rd Priority	2nd Priority
Low impact	Lowest priority	4th priority	3rd Priority

This can then give you a priority list for action in the sector.

Look carefully at your list and ask if it makes sense. Tools like the matrix above are aids to analysis, not a substitute for analysis. The assumptions you make influence the results, and it is always good to have a reality check afterwards.

For example, in the above analysis, there is no reference to training. It might be worthwhile going back over the original problem analysis and asking if better staff training could have influence the speed of provision of jerricans etc to the IDP population - maybe not, but you should check on any apparent gaps in the solution.

Step 6 - Developing the capacity building plan



Building on the priority list identified earlier, the next question is who should implement the actions identified.

In some cases, the actions will be for all the WASH group members, in others, for only one member or a group of members.

After agreement in principle you need to agree actions that are:

1. Specific - it must be clear exactly what is to be done. For example *"train staff from five WASH agencies to conduct rapid needs assessment"* rather than *"train staff from WASH agencies in rapid needs assessment"*.
2. Measurable - there should be a target so it is possible to tell whether the action has been done as planned or not. For example *"train 50 staff from five WASH agencies to conduct rapid needs assessment"* rather than *"train staff from five WASH agencies to conduct rapid needs assessment"*.
3. Accountable - the person or entity responsible for implementing the action should be clearly identified. For example *"Oxfam will train 50 staff from five WASH agencies to conduct rapid needs assessment"* rather than *"train 50 staff from five WASH agencies to conduct rapid needs assessment"*
4. Realistic - they should be within the realm of the possible. For this reason, you need to give a clear statement of what the resource implications are.
5. Time-bound - the timetable for implementing the action should also be given *"Oxfam will, by December 2010, train 50 staff from five WASH agencies to conduct rapid needs assessment"* rather than *"Oxfam will train 50 staff from five WASH agencies to conduct rapid needs assessment"*
6. Coherent - The planned actions should be coherent with each other and should neither contradict nor seem to contradict each other.
7. Ordered by priority - so that it is clear which actions are of primary concern and which ones are secondary.
8. Limited in number - if you make a large number of action points, this may be so demanding that not action one gets implemented. You might want to divide the actions up into phases to get around this.
9. Economic - the proposed actions should clearly deliver benefits in proportion to their costs.

This can be prepared as a matrix as below

Priority	Description	Target	Action by	Due Date	Notes
2	*Train staff from five WASH agencies to conduct rapid needs assessment*	*50*	*Oxfam*	*Dec 2010*	*Unicef to provided training materials*

Step 7- Monitor the implementation of the plan

Plans are just bits of paper. You capacity building plan will be just another wasted effort unless you monitor how well the planned actions are going ahead.

This means that the planned actions should be reviewed every quarter to see what progress has been made.

Priority	Description	Target	Action by	Due Date	% in Qtr.	% done	Notes
2	*Train staff from five WASH agencies to conduct rapid needs assessment*	*50*	*Oxfam*	*Dec 2010*	*20%*	*40%*	*Unicef to provided training materials*

If little or no progress has been made for a particular activity, it is appropriate to ask if the activity is still needed. It is also useful to examine progress against the original cost/impact matrix to ensure that high priority actions are getting enough attention.

	High cost	Medium Cost	Low Cost
High impact	Set up stocks - 10%		Establish stockholding policy - 40%
Medium Impact		Survey stocks - 0%	Standby agreements - 5% Build relationships with local government - 80% Set up long term agreements with suppliers - 60%
Low impact	Coordinated procurement - 0%		Gather data on all areas - 100%

Another type of monitoring you should do is as part of your future after-action reviews. You should ask what impact capacity-building actions you have taken have had on your response. It is essential to identify what benefits there have been to justify continued investment in capacity building.

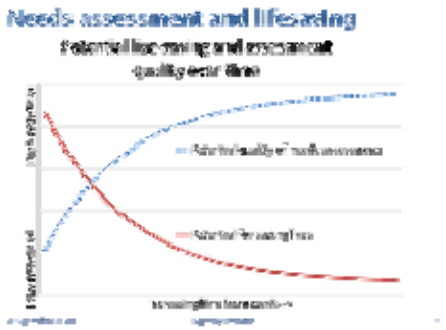
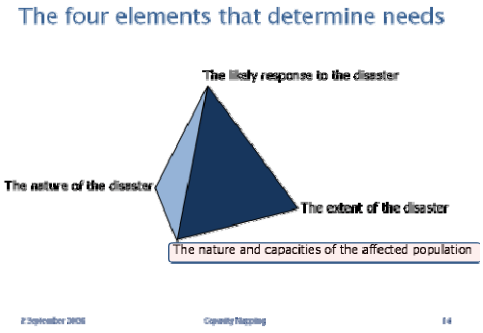
Appendix A: The introductory presentation

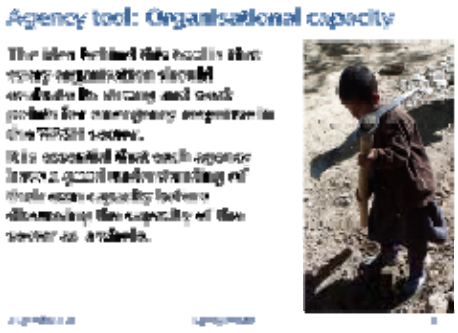
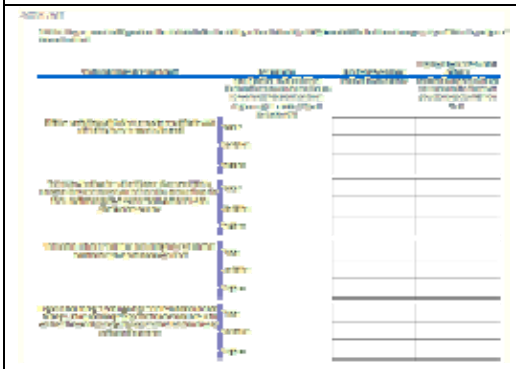
The following is a presentation that can be used to introduce the tools and their history. It is available as a PowerPoint presentation from the global wash cluster.

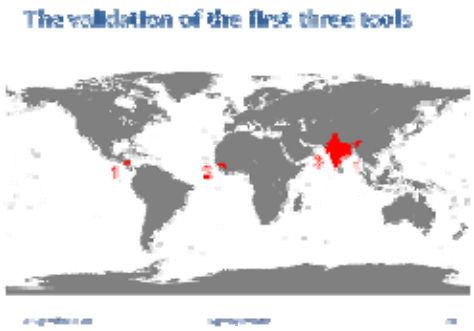
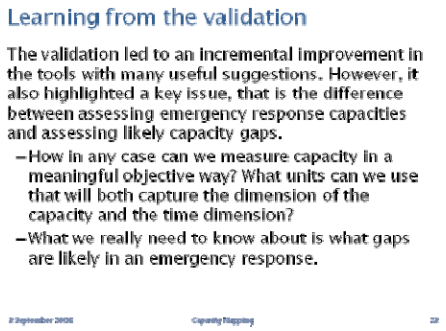
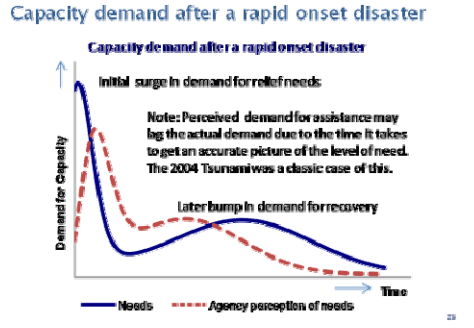
Welcome 	Welcome everyone to the workshop. The photo shows an irrigation canal in Afghanistan. This water is used for washing as well as for irrigation.
WASH Capacity Mapping and Assessment 	Emphasise that the workshop is going to draw on the knowledge and experience of all the participants. However the first part will be this presentation, but soon everyone will be able to use the tools. The photo shows an Oxfam T10 tank in Abu Shok Refugee camp in Darfur
	First we have introductions - now for some reason this goes much faster when people introduce each other rather than introducing themselves. You can make this fun by using a soft ball (a scrunched up flipchart sheet secured with tape) to toss to the next pair for introductions. Photo shows a little girl in Darfur

	Why are we interested in capacity at all? Of what practical significance is it? You can put these questions to the groups and see what they come up with. Photo shows a dummy latrine in a disaster response mock drill in West Bengal in India.
The aim of the project 	The aims of the capacity mapping project are clear, but the overall goal, that of improving emergency response is not so clear. Photo: Young women collecting water in rural Angola
The project 	Of course the number of tools increased over the life of the project to five in total. Photo shows a young woman collecting water in Luanda, Angola.
The approach The approach developed for the pre-emergency assessment tools was: 1. To look at existing WASH capacities, and the general background framework. This was developed as the WASH background data tool. 2. To look at the capacity of individual WASH agencies. This was developed as the Agency Capacity tool. 3. To look at sector-wide capacity issues (such as the emergency coordination system), and capacity issues from beyond the sector. This was developed as the Sector Capacity tool.	The approach taken is reflected in the first three tools developed by the project.

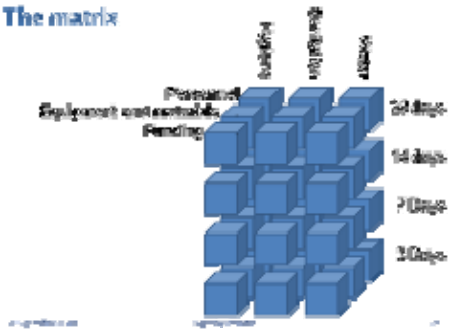
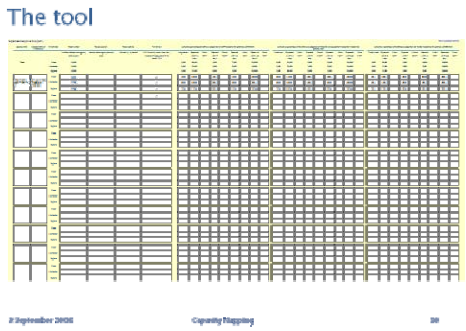
Tool One: WASH background data 	Ask participants for other examples of zoning (land use planning, taxation, agricultural etc). Photo shows a hand-pump in West Bengal
	You may decide to distribute copies of the Background Data tool at this point, or you may prefer to leave them until you look at tool one in depth. Image shows the first page of tool one.
What's in the zone data The tool collects data for zones on: – Basic zone data (population and area) – Zone profile (livelihoods, poverty, and operational constraints) – Water data – Sanitation data – Hygiene data It also look for national data on: – Bibliography – Resource persons – Reference Datasets and maps – Internet resources 	This simply lists the elements of tool one. Hygiene is spread over two pages - general hygiene and personal hygiene. Photo: Filling jerricans public water point in Luanda, Angola.
How to collect the data 	You should explain which alterative (starting with the consultant or starting with the WASH group) you have gone for and why. Photo: Small group work in Nicaragua

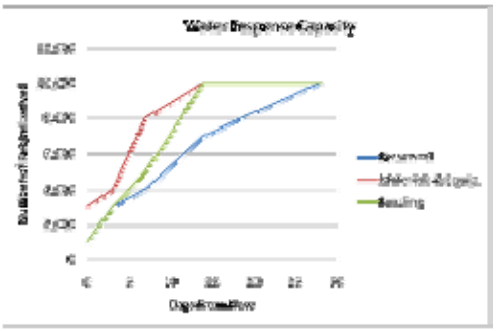
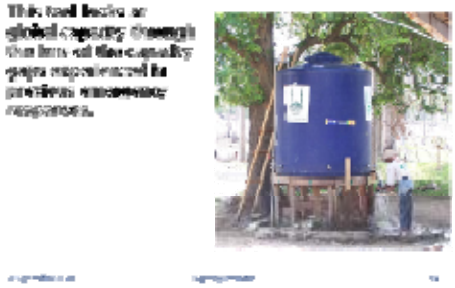
	The Photo shows an ethnic Kosovar in Macedonia. During the 1999 Kosovo crisis this woman put-up refugees in her house without payment. An NGO offered to install a toilet and shower for her if she agreed that refugees staying in other houses could also use it. She agreed and was delighted with the result. Her only complaint- that the agency had not put any water point for anal cleansing in the toilet cubicle. This came as a standard option on toilets sold in this part of Macedonia, but it never occurred to the NGO even to ask. Such errors are common due to ignorance about hygiene habits, and are the reason why agencies need to know the WASH background of the populations they are working with,
	This graph demonstrates the trade off between the quality of assessment and the life-saving potential. Clearly the more thorough your assessment, the better it can be. However, the longer you taken to intervene the fewer lives you will save as the most vulnerable may already have died, or the populations may have found another solution (this solution may be sub-optimal, such as drinking polluted water).
	This tetrahedron shows the four elements that you need to know to mount an effective response. However, apart from the extent of the disaster, all the others can be known before the disaster, or quickly estimated after the disaster (. The background data tool concentrates on the nature and capacities of the affected population.
	Evaluations have repeatedly highlighted problems with needs assessments in humanitarian response. Getting you data together before hand gets around this problem. The photo, of a latrine door in Damongo in Ghana, illustrates the need to plan before you act. The photos come up with each click rather than all at once. The message is that you should cut the need notch in the toilet door before you need to use the toilet urgently.

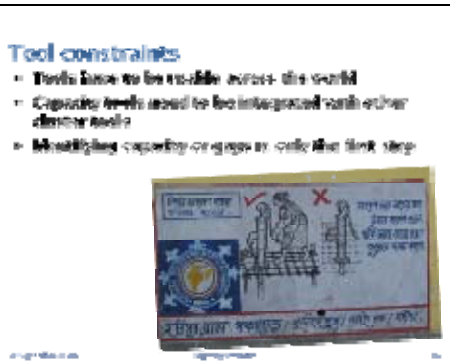
	The agency capacity tool was developed to help the WASH group identify what capacities members had to intervene in emergencies. This photo illustrates one of the difficulties with capacities. A capacity with the same name can be very differently. This five-year-old boy with a pickaxe in Nahrin in Afghanistan was one household's contribution to the digging of trenches from a water scheme. The NGO involved said that they would provide pipes, fittings, cement, and a plumber if the population provided one person per household to dig the trenches etc.
	This is the staffing page of the agency capacity tool - this page has proved the most difficult of all of the parts of tool two, because agencies have had very great difficulty in saying what staff could be available for an emergency of a particular scale.
	The Sector Capacity tool uses three rating sheets to allow participants to rate these three different aspects of the sector. You start with and individual rating, and then discuss the issues to arrive a consensus rating for each group. Photo shows a drilling rig at an IDP camp in Aceh after the December 2004 Tsunami.
	This is an image of one of the rating sheets. For a particular topic, you simply pick which of the five descriptions of the situation most closely correspond to your view.

	The image shows the graphs produced by the sector three tool (showing the relative levels of support for the five options for each topic), when the data from the individual ratings is entered.
	The three tools described above were tested in Nicaragua in Central America, in Guinea in Africa, and in India (West Bengal specifically) in Asia. They have since been modified slightly following a workshop using the tools in Kenya.
	The validation was successful but exposed a basic flaw in the approach - that capacity is not only difficult to measure but also changes rapidly over time. What we are really interested in what gaps are we likely to face in any future emergency response.
	This graph shows the typical pattern of capacity demand after a sudden onset natural disaster. There is a high peak that quickly drops off as the un-rescued die or survivors find other solutions. Demand rises again as we move into the recovery phase. The perceived demand follows a somewhat different pattern, and the demand is seen to risk rapidly in the initial phase as the news comes in.

Meeting the peak need	Even the richest country does not have the resources to fully meet the instantaneous peak demand. Ask the participants which of the listed strategies they are familiar with.
How can we identify gaps 	Ask if any of the participants have conducted after action reviews after a recent response and what gaps they identified in their own response. Photo shows a chlorine gas cylinder lying on the ground at a water plant in Basra (this cylinder is in use and is lying in the sun - a complete breach of normal safety standards).
Other lessons 	The members of the WASH group already have fairly full workloads. Photo show why women live longer than men.
Tool four: For emergencies 	In emergencies we need a very quick means of identifying gaps so that we can take immediate management action. Photo shows a tap-stand at an IDP camp during the 2007 Mozambique floods.

	We can measure capacity to some extent during an emergency as we are only interested in the immediate. We are not asking people what they might contribute in a hypothetical situation at some state in the future, but what they can contribute now. Photo of latrines in 2007 Mozambique Floods IDP camp
	The approach taken is divide the resources available to each agency into the WASH components and into Personnel, Equipment and materials, and Funding and to look at those over the next 28 days at the 3,7,14,and 28 day stages.
	The data is entered on a spreadsheet which automatically collates the data from each individual agency. It included a checkbox for distinguishing critical support (latrines built) from supplementary assistance (hygiene kits) - the context of any situation will determine what constitutes critical support - in some cases it may be hygiene kits.
The Approach The approach is to ask agencies that for the population they intend to assist in the next 28 days (in each of the three WASH sub sectors of water, sanitation, and hygiene) what proportion of the: • Personnel • Materials and equipment • Funding That they need to assist the target population they expect to have in 3 days, 7 days, 14 days, and 28 days time. The spreadsheet collates the information to present small charts showing the expected levels of service	The approach is to ask agencies what number of people the plan to be assisting with WASH in 28 days time and then asking what proportion of the resources they will have to fully meet the needs of this population in 3, 7,14 and 28 days.

	The tool also includes a background data section similar to the background data tool, except that the data is organised by affected zones rather than by national WASH zones. Photo shows an MSF team building a barrel stand for a pillow tank at a refugees camp on the Pakistan-Afghanistan border in 2001.
	The output of tool four is a chart which shows which of the three areas, personnel, materials and equipment, or funding, are likely to be the key constraint in the next 28 days. This allows managers to focus on the critical constraint by advocating with government or donors, or by devising alternative solutions.
	The global capacity tool survey was launched in July 2008 and closed at the beginning of September 2008. We can use a survey here because of the depth of experience globally. We have this depth of experience due to the occurrence of medium emergencies every few months and of major emergencies every few years. Photo shows a water tank in Aceh.
	Correction, over 400 responses were received. Photo: school toilets in Zimbabwe

	This summarises the tools. Photo: Boys collecting water in Pakistan - serves to remind us that cultural factors influence something even as basic as collecting water.
	The fact that the tools have to be usable in a wide variety of contexts means that they may have some aspects that are less appropriate for particular contexts. Photo shows a DRR message in West Bengal - mount pump on platforms above the flood level so that you still have access to clean water even during the annual floods.
	And thanks to you also - the development of the tools has only been possible because of the selfless contribution of many WASH experts.

Appendix B: Notes on the background data tool

This tool is available as a spreadsheet from the Global Wash Cluster.

In order to allow the data to be represented on simple Geographic Information System (GIS) tools you should restrict your answers (except for the Source and Notes fields) to 256 characters.

Basic Zone Data

Basic Zone Data — Return to table of contents

	Zone Name	Zone Geography	Zone Population	Zone Area
Data Sources	What are the sources for your data or estimates?			
Ideally, you should not have more than 10 zones.	Choose a name that makes sense and describes either the geography (e.g. Western District) or a predominant feature (mountain spring).	A short description of what the zone includes (All of Northern district plus the eastern third of western district).	The approximate population of the zone	The approximate area of the zone in square kilometres
Zone 1				
Zone 2				
Zone 3				
Zone 4				
Zone 5				

Figure 13: Example of the Basic Zone Data page from the background data tool. Note: This is simply an illustration of the appearance of the page. Open the spreadsheet to see all the pages of the actual tool.

This is simply a short description of the selected zones:

Q: Data Sources: What are the sources for your data and estimates?

This simply asks for the source for the zone population and the zone area figures. When quoting a census or prediction, indicate the year that this applied to. Indicating data sources is particularly important for the background data tool as this helps those updating data to decide between

different data when there is a conflict between the data in the tool and an apparently new data that they hold.

During the annual revision, it is suggested to use new data on hand-washing practice in one district to update the original data. However, the source of the original data is shown as a nation-wide survey three years ago. It was decided to keep the original data as it was a nation-wide survey and had a stronger methodology than the recent survey.

Q: Zone Name?

Choose a name that makes it easy for users to identify the zone afterwards. You can use a name that describes the geography (Western District) or a predominant feature (Mountain spring zone) or characteristic (Arid Zone).

Q: Zone Geography?

This should be a short description of the geography of the zone that allows users to know what is and what is not rapid identification of the zoneA short description of what the zone includes (All of Northern district plus the eastern third of western district).

Q: The zone population?

The approximate population of the zone (but indicate your data source and the year of the estimate)

This is a straightforward question at one level, but it also encourages you to select existing administrative boundaries for the zone as finding out the population is much easier in that case. If finding the population for the zone boundary for have chosen is difficult then finding the other data may be impossible.

Q: Zone area?

This is the approximate area of the zone in square kilometres. As with the population question, it can help to identify smaller, less important zones that can be incorporated into other zones to keep the number of zones reasonable.

Zone Profile

The zone profile page asks questions about the economic profile of the zone, and about possible constraints on emergency WASH operations in the zone. As with all the pages it is important to indicate the source of your data or estimates.

Q: Livelihoods: What is the mix of livelihoods in the Zone?

The pattern of livelihoods may indicate particular WASH vulnerabilities. For example, irrigated agriculture may place people at risk of some vector-borne diseases, or cattle

herding may raise issues of ensuring access to clean water away from cattle water areas.

Q: Poverty: What is the level of poverty in the zone?

The level of poverty is a good indicator of the likely level of dependency on external assistance in the emergency response. High levels of poverty suggest that communities will have few resources with which to address any WASH problems after an emergency.

Q: Transport infrastructure: What is the level of transport infrastructure like in the zone?

Areas with low level of transport infrastructure can prove very difficult when you are trying to mount emergency operations. You could give an indication of the overall road structure. Using average speed is a good indicator for road conditions.

Q: Warehousing: What is the availability of warehousing in this zone?

Warehousing is an essential feature for emergency operations to disconnect long haul supplies from local distribution. Without some warehousing it is very difficult to run an efficient logistics operation as the long haul transport will often not be able to access all the likely distribution sites. Is warehousing readily available for rent? Are there times of year, such as harvest or the weeks prior to religious festivals when it is difficult to get warehouses.

Q: Wash networks: Is there any active WASH coordination in this zone, apart from the national level coordination?

As well as WASH coordination at the national level, there may also be effective local WASH coordination. Such local coordination can play a large role in improving the WASH sector's response to emergencies as the players will already be used to working with each other.

Q: WASH supplies: What is the supply picture in this zone - are WASH supplies manufactured here or do they come from other zones?

If key WASH items are manufactured locally, or are available in significant quantities in the local markets then bringing them into the zone may not make sense. If they are not available locally in large quantities, then agencies need to plan to bring them into the zone.

Q: WASH Constraints: What is the biggest constraint on normal WASH programmes in this zone (e.g. Lack of drilling contractors)?

Emergencies occur in an existing WASH context. Whatever physical or social constraints already affect WASH programmes prior to the emergency may be even stronger after an emergency.

Ask your programme colleagues or the WASH group generally about the constraints they face in the zone.

Hazard Profile

This section asks about the typical pattern of Hazards in a Zone. Quite commonly there will be one major hazards and a number of minor ones. This page asks you to look at a primary hazard and a number of secondary hazards.

You may able to get information on hazards from a recent hazard mapping or contingency planning exercise.

Q: Primary hazard: What is the main natural hazard in this zone (Floods, earthquakes etc)

The main natural hazard is most frequent one, but the Hazard that is likely to have the largest impact when you look at the cumulative impact of all hazards likely to occur over a span of a few hundred years.

Q: Typical Impact: What is the typical impact of this hazard, including the numbers of affected?

The impact will refer to the likely impact of a major occurrence. This impact should be tied into the likely frequency of the hazard. The likely impact could be estimated (based on previous experience) as probably level of: people affected; deaths; injuries; economic losses; lost livelihoods; environment damage etc. You may choose one or more of these for describing the level of the likely impact.

Impact is tied in with the next question about the frequency of occurrence, as you might have small floods every year, but major floods every 10 or 20 years. Clearly the annual floods will have a different level of impact from those of a severity that is seen only once very twenty years. Whatever level of impact you select is related to the likely frequency of occurrence.

Q: Frequency of occurrence: How often does this hazard occur?

This refers to the frequency of the hazard with the impact level described in the last question.

Q: Comments on primary hazard: Any comments on the primary hazard

Your comments on this hazard. Comments could include reference to the last instance, or particular issues (e.g. Cyclones typically cause flooding of local wells - leading to the need for cleaning and disinfection).

Q: Secondary Hazards: What other main hazards are a high risk in this zone (Floods, earthquakes etc)

This asks about the other hazards affecting the zone. Obviously this list could be very long, so you need to restrict yourself to major hazards.

Q: Typical impact: What is the typical impact of these hazards, including the numbers of affected?

The likely impact for such hazards of the frequency given in answer to the next question. This obviously varies by hazard type.

Q: Frequency of occurrence: How often do these hazards occur?

How often do hazards of the given level of impact happen.

Q: Comments on Secondary Hazards: Any comments on the Secondary hazards?

Your comments on these secondary hazards.

Water Data

Water Data

Return to table of contents

Data Sources	Water Source	Seasonality	Quality issues	Water treatment	Water Distribution	Household Water Transport and storage	Household water treatment	Consumption	Safe water coverage	Water Quality Control	Water Management
What are the sources for your data or estimates?											
	What is the main source of water for this zone	How does the availability of water from this source change during the year?	Are there any particular quality issues associated with the water in this zone (e.g. excess fluoride)	What is the predominant type of communal water treatment used in this zone (e.g. Chlorination only)	What system is used for water distribution in this zone (e.g. Public standposts, household connections, public wells etc)	How do housholds carry water from public sources and store it in their houses	Is household water treatment used widely, and if so , what technology is used? (boiling, chlorine, filters)	What is the water consumption level in this zone in litres per person per day	What percentage has 'safe water' (Piped water to house or standpost, tubewell or borehole, or protected source.	What is the system for water quality control in this Zone?	What is the typical structure for water supply management in this zone (eg well committee, municipal water company etc.)
Zone 1											
Zone 2											
Zone 3											
Zone 4											
Zone 5											
Zone 6											
Zone 7											

Figure 14: Example of part of the Water Data page of the background data tool. Note: For illustration only. Consult the actual tool to read the headings.

As always the first question is on the source of the information that you are providing. This can be critical later on when others are using your data and need to decide how much they can rely on it.

Water supply is a central WASH area. These questions seek to establish a picture of the water supply situation in each of the zones.

Q: Water source: What is the main source of water for this zone?

Straightforward question about the principle sources of supply. Remember that zones will often include a mix of sources, and you answer may be “80% shallow wells with 20% boreholes in small towns and urban areas”.

Q: Seasonality: How does the availability of water from this source change during the year? How reliable is this source (hours per day or days per month)?

Seasonality of supplies is often one of the big issues with supplies in the tropics. While surface sources show very strong seasonality, the same can also be true of ground water sources with, for example, large variations in water sources throughout the year. This is flagged up here because this can be a critical factor in deciding where to locate camps etc.

The second issue here is reliability. Some standposts in peri-urban Luanda, Angola only have water for four days a month on average. Clearly they cannot be regarded as improved sources in this case.

Q: Quality issues: Are there any particular quality issues associated with the water in this zone (e.g. excess fluoride)?

There can be particular quality issues associated with different sources. Bacteriological contamination is the normal problem with surface sources, but chemical issues (arsenic, iron, salinity) may predominate with ground water sources. Knowing what the potential quality problems are in advance can help to avoid problems in the response. There may be existing programmes trying to deal with specific quality issues.

Q: Water treatment: What is the predominant type of communal water treatment used in this zone (e.g. Chlorination only.)

A straight-forward question that informs us what sorts of additional supplies (Alum, Chlorine etc) the WASH cluster may need to provide in the event of increased demand, as well as letting us know what the probable level of contamination is.

Q: Water distribution: What system is used for water distribution in this zone (e.g. Public standposts, household connections, public wells etc)?

Water distribution systems can range from household connections to delivery by private water tankers or water sellers. Knowing the system that people already use will not only indicate the likely associated health risks, but will also inform the cluster about the knowledge of the community of dealing with different supply types.

Figure 15: Water distribution in Darfur, Sudan. On the left is the welded donkey-drawn metal tank commonly used for water delivery in Nyala. The middle shows the donkey-borne bladders used for distributing water in El Geneina, and the right shows the horse-drawn tank used in El Fasher. Although all three towns are in Darfur, they each have a different distribution system that is adapted to the local conditions. For example, in El Geneina, the sand is so soft that using a wheeled vehicle to delivery water would be difficult in many areas. You should be aware of differences within and between zones.

Q: Household Water Transport and storage: How do households carry water from public sources and store it in their home?

The answer can range for water tankers to jerricans. Household water storage may be in open pots or even in cisterns (underground water tanks).

Q: Household water treatment. Is household water treatment used widely, and if so, what technology is used? (boiling, chlorine, filters)

Household water treatment is used widely in some societies. This question asks if it is a major part of current water treatment practice in the zone, and which method is mostly used.

Q: Consumption: What is the water consumption level in this zone in litres per person per day?

This question is not as simple as it seems as there can be wide variations.

> *The Drawers of Water II surveys in 2001 (Katui-Katua, 2002; Mujwahuzi, 2002; Tumwine, 2002) showed that there had been significant changes in the consumption of water in East Africa since the first Drawers of Water (Bradley et al., 1972) survey in 1966-'68. The average daily consumption of water per person for increased from 11 to 19.7 litres for households without piped supplies. Those with piped water supplies saw a drop from 128 to 66 litres per person per day (Thompson et al., 2002, p. 33).*
>
> *The new survey shows that even for households without piped water, consumption can vary greatly. The highest level recorded in unpiped households in 2001 was 45.3 litres per day for Moy's Bridge in Kenya, and the lowest was 9.1 litres per person per day for Mwisi, Uganda.*

This example from *Drawers of Water* highlights the need to identify what the actual consumption is in the selected zone rather than relying on a standard figure. People who are used to using 40 litres a day will have trouble keeping clean if they only get 15 litres a day.

Q: Safe water coverage: What percentage (of the population) has 'safe water' (Piped water to house or standpost, tubewell or borehole, or protected source?

"Safe water" here refers to improved water supplies as defined by the WHO/Unicef Joint Monitoring Programme (WHO and Unicef, 2006, p. 4).

Improved water sources	**Unimproved water source**
Piped water into dwelling, plot or yard	Unprotected dug well
Public tap/standpipe	Unprotected spring
Tubewell/borehole	Cart with small tank/drum
Protected dug well	Bottled water (if washing and cooking are not both improved)
Protected spring	Tanker-truck
Rainwater collection	Surface water (river, dam, lake, pond, stream, canal, irrigation channels)

This is a useful indicator for judging to what extent the population are already using the types of sources that they might be forced to use after a disaster. Remember that in many cases "safe water coverage" may be virtual rather than real, as in the case with urban area that have piped water supplies that only work for an hour a day. In many countries there is some political pressure to improve indicators like that of safe water coverage, without necessarily ensuring that people have real access to safe water. You should note any issues around the statistics here.

Q: Water quality control: What is the system for water quality control in this Zone?

The system for water quality control can vary from none at all to a regular sampling and testing system. You should briefly describe the water quality control system in this zone (if any).

Q: Water management: What is the typical structure for water supply management in this zone (e.g. well committee, municipal water company etc.)

What is wanted here is a very brief description of the water management system in the zone. (For example *10% of sources have active hand pump or stand post committees. Small town systems are managed by municipal authorities.*) This is an important issue because many emergency response begin without considering the existing management infrastructure, and go on to set up new water committees etc.

Sanitation Data

The second leg of the WASH triangle, sanitation is often the area of greatest difficulty in emergency response, because sanitation can often be the most expensive of the WASH components.

Q: Faecal Disposal: What is the primary source of faecal disposal used in this zone (e.g. pit latrines)?

The intent of this question is to establish what sanitation technology the population are used to. This may help you to decide what technology is most appropriate in this zone or indicate where hygiene education may be particularly needed.

Q: Sanitation coverage: What percentage of the population in the zone uses latrines of any type?

This is related to the following question. The question is split because you can have high use of, for example, night-soil latrines which are not regarded as improved latrines.

Q: Improved sanitation: What percentage used improved latrines (pour-flush, ventilated improved pit latrine, pit latrine with slab, or composting toilet.)?

Improved latrines here refers to improved sanitation as defined by the WHO/Unicef Joint Monitoring Programme definition (WHO and Unicef, 2006, p. 4).

Improved sanitation facilities	Unimproved sanitation facilities
Flush or pour –flush to: - piped sewer system - septic tank - pit latrine	Flush or pour–flush to elsewhere
Ventilated improved pit latrine	Pit latrine without slab or open pit
Pit latrine with slab	Bucket
Composting toilet	Hanging toilet or hanging latrine
	No facilities or bush or field

Q: Gender: Are the gender differences in faecal disposal or in latrine usage?

Differences between the levels of male and female usage of latrines can be observed in many countries (Nicaragua, Sri Lanka and Pakistan among many others). This question asks if there are significant gender differences in the different WASH zones. The answer here may mean that you will need to mount a special campaign to encourage men to use latrines.

It may often be difficult to find information on gender differences in this area as the topic may be taboo, or because it does not form part of standard indicators. Places to look are latrine usage surveys or more general studies on gender roles.

Q: Garbage: What is the primary means of garbage disposal in this zone (e.g. Local authority collection)?

Garbage disposal is often a significant problem in camp settings or in post-conflict environments. This question is intended to identify what the existing systems are so that you can plan an appropriate system.

Q: Drainage: Are there any significant drainage issues in the zone?

Drainage is often a problem in urban areas and in camp settings. Drainage problems can pose a health hazard or make services inaccessible.

During the 1999 Kosovo crisis, one donor spent many millions of dollars developing a refugee camp near the Albanian coast. Unfortunately, the land had severe drainage problems and the site was like a shallow lake when it rained. Fortunately, the refugees returned to Kosovo before they had to endure this problem.

Q: Sanitation issues: What is the biggest sanitation problem in this zone (e.g. overflowing cess pits, uncontrolled garbage tipping)?

It is often the case that increasing population or the rapid growth of urban areas has led to falling service levels. There may already have been significant problems prior to any disaster. After a disaster it is likely that these problems may pose a larger threat because of changed circumstances.

Q: Vectors and parasites: What vector borne diseases are problems in this zone?

Vector borne diseases (such as malaria, dengue, leptospirosis, or others) are often a serious sanitation concern after emergencies. This is especially so where the movement of people or changes in vector habitats lead to a greater exposure of those susceptible to the disease to infected vectors.

Hygiene Data

Hygiene can often be the poor relation in emergency response where the greatest effort is focused on water and sanitation. In the past, hygiene education has often been tacked on at the tail end of other components. However, research has repeatedly shown that WASH projects have the largest impact on health when they include all three aspects of Water, Sanitation, and Hygiene.

The logic behind many of these questions is for the WASH cluster to have a good awareness of how difficult hygiene education will be for this population in the event of an emergency. Emergencies may lead to people being in new situations where there existing hygiene practices are no longer appropriate. The answers to these questions can help prioritise hygiene promotion and health education appropriately in the response.

Q: Female Literacy: What percentage of adult females are literate?

The gender roles commonly assigned to women in developing countries as child-carers, food-preparers, and house-keepers, mean that they play a critical role in family hygiene. Ever since Caldwell's milestone paper (1979), maternal literacy has been recognised as playing a key role in reducing child mortality and there is now a rich literature on this topic (Bourne and Walker Jr, 1991; Grosse and Auffrey, 1989; Mølbak et al., 1997; Syamala, 2004; Terra De Souza et al., 2001; World Bank, 1993), and even some studies is linking maternal literacy to child survival in historic times (Derosas, 2003).

However the link is contested by some (Desai and Alva, 1998) and it is clear that the relationship is not a simple one. Esrey (1988) found that literacy made the biggest impact when people did not have access to good sanitation. Hobcraft (1993) found that association between maternal health and survival was lower in Africa than elsewhere, but suggested that this may be due in part to the lack of health services for educated mothers to take advantage of. Sandiford (1997) found that maternal literacy made the biggest difference with mothers rated as being less intelligent. While the relationship is complex, maternal literacy can have a large impact on child survival, especially when

normal systems are disrupted. In any case we need to know levels of female literacy to identify whether text based messages can be used effectively for health promotion.

Q: Water related diseases: What are the main water related diseases in the zone (water borne, water washed or water related)

This asks about the main types of water related disease, including not only water borne diseases but also water washed and other water related diseases (where vectors may live in the water or use water as part of their life cycle).

Q: Diarrhoeal disease: What is the incidence of diarrhoeal disease per child under five per year?

This is a measure of the overall WASH impact. This can be influenced by water supply, but very strongly by sanitation and hygiene practices. Values from this can range from less than 1 to over 10 (Kosek et al., 2003, p. 199), but Mølbak (1997) reports values over 15 in Guinea Bissau.

While this is an excellent indicator, it may not readily be available. In that case you can use some other diarrhoeal morbidity indicators instead (percentage of under five health centre consultations that are for diarrhoea or some such).

Q: Vector borne: What is the incidence of vector borne disease in this zone?

This question asks about the incidence level of vector borne diseases (an earlier question asked which vector borne diseases were the principal ones). Vector borne diseases may be addressed through sanitation measures (such as removing breeding sites) and hygiene measures (such as using bed nets).

Q: Infant mortality: What is the infant mortality rate (deaths of children under one per 1,000 live births)?

This is an indicator of overall health stress on children, and reflects not only WASH but other health risks, including disease, poor childbirth practices, malnutrition, economic stress, access to health services etc. Children make a better indicator than adults in that they are more sensitive to health risks than adults are.

Q: Immunisation level: What percentage of the under five population has the recommended immunisations?

This is an indicator of the overall take-up of health services by the population. Where immunisation levels are low this may be because of lack of access (through low levels of service, or the high cost accessing them), or people not being convinced by the health education messages around immunisation. In some ways this is a proxy indicator of the openness of the population to health messages and of the performance of the health services.

Personal Hygiene

Personal hygiene is often a difficult area as it may touch on taboo topics such as anal cleansing methods or menstrual hygiene. It can be quite surprising to find how little many WASH professionals may know about the practices prevalent in their regions. However the question is important as inappropriate sanitation assistance can create problem.

Q: Soap use: What is the level of soap use in the zone?

Soap usage is an indicator both of access to soap and of acceptance of the basic hygiene messages about hand-washing. The poorest communities may have no access to soap due to its cost.

Soap is very important for controlling cholera epidemics. Hand washing with soap have been found to have a large influence on the likelihood of contracting cholera in many studies (Hutin et al., 2003; Quick et al., 1995; St Louis et al., 1990).

Q: Hand washing after: What percentage of the population washes their hands after using a latrine?

This question is a good test of current levels of hygiene education around sanitation. It is recognised that for this, and for several other questions in this section, information may not readily be available, but without this information it is difficult to plan for an effective response.

When you are looking for information that falls outside the standard WASH indicators, you may find that data in studies on specific aspects prepared for donors or as part of academic research. The national or local university or technical institute may be a good starting point for searching for such data.

Q: Hand washing before: What percentage of the population washes their hands before eating?

This is a related question. It is really about the attitude of hygiene awareness of the population around food preparation and consumption. Hand-washing before eating is an important secondary barrier to faecal-oral transmission.

Q: Menstrual hygiene: What is the primary method of menstrual hygiene used? (pads, tampons, washable cloths)?

Menstrual hygiene is often a very taboo area. Supplying inappropriate material can lead to waste while failing to meet women's need.

After the 2005 Pakistan Earthquake sanitary pads distributed in some hygiene kits were used as earmuffs by men (Crawford et al., 2006, p. iv in appendix A) (women in rural areas there generally use rags). The fact that the kits were distributed by men also prevented women from accessing them (Khan et al., 2008, p. 330).

Q: Infant Faeces: How do people deal with infant faeces - washable nappies (diapers), disposable nappies, unclothed etc?

People may deal with the faeces of infants who are not toilet trained in a number of ways, including letting the children walk or crawl around unclothed when it is warm enough. It is important to know what the norms are, as disposable nappies need a proper disposal system, and cloth nappies need a proper laundry system.

In the Kosovo crises, no bins were provided for disposable nappies (diapers) leading them being thrown into the chemical toilets and causing blockages for the suction trucks that emptied the chemical toilets.

Q: Anal Cleansing: What is the primary form of anal cleansing used by the population in this zone (e.g. Water)?

Anal cleansing can have a significant impact on the sanitation system provided.

In the Kosovo crisis, the fact that the Kosovars typically used water for anal cleanings led to problem with the latrines as they quickly filled with empty plastic mineral water bottles as no water sources were provided in the latrines (Donev et al., 2002, p. 188; Morris, 1999, p. 19).

Q: Are there any specific cultural beliefs that have an impact on hygiene in this zone?

Hygiene practices reflect cultural beliefs about disease. Sometimes these cultural beliefs are aligned with the germ theory, but sometimes they are not. Here is an opportunity to highlight local cultural beliefs that have an impact on hygiene.

Bibliography

This section asks for bibliographic data (data that uniquely describes a document and that allows others to locate a copy of it) for information sources for the background data tool and report. Providing bibliographic data is important as it reinforces the authority of the background data report as well as enabling readers to check on the underlying sources themselves. Check on the underlying resources can be important when there is conflicting information.

A background data report stated that hand-washing was rarely practiced in one province. A member of the WASH group challenged this, at least for urban areas. The bibliography showed that the data was based on a report referring to rural areas only and the background data report was amended.

Q: Name of document?

What is the full title of the document? You should also include the short title of the document if it is better known by this name.

Q: Type of document?

What sort of document is it? Document is used very loosely here, and the term includes videos etc.

Q: Author

Who wrote the document? Every document is written by someone, although some institutions prefer that authorship be assigned to the institution rather than individual authors.

Q: Year or date

When was the document published - this can be important when there is a conflict between different sources or even between different editions of the same source.

Q: Publisher?

Who published the document? Where are they located? This information can help to locate a copy of the document if a reader wants to see the full data.

Q: Key information contained?

What key information is contained in this document? This is not a full summary of all the information but only an indication of which data is used to

Q: Weblink?

For documents that are available on the internet, where can they be found.

Q: Last accessed?

For any cited document that is available on the internet, when did you last access it.

Resource People and Institutions

This page is intended to capture the names of key individuals and institutions with areas of specialist knowledge in the WASH sector. Such individuals may include;

- Consultants, staff, or officials who was worked for many years in the national WASH sector and have taken part in most of the major studies or the sector.
- University professors or academics who have studied one part of the sector in detail.
- Consultants, staff, or officials with very detailed knowledge on one part of the sector.

The aim is not to identify every knowledgeable person in the sector but only those who are regarded as the main sources of information on the sector.

Key institutions may include:

- Documentation centres and technical libraries.
- Intuitions studying a particular part of the WASH sector.
- Academic institutions with a specific WASH sector competence.

Again, the aim is not to list every possible institution, but to identify those which are the key information sources.

Q: Name of individual or institutions?

This is the full name of the institution or individual. The acronym or short title by which the institution is most commonly known should also be given.

Q: Area of specialist knowledge?

What is the area of specialist knowledge of this individual or institution?

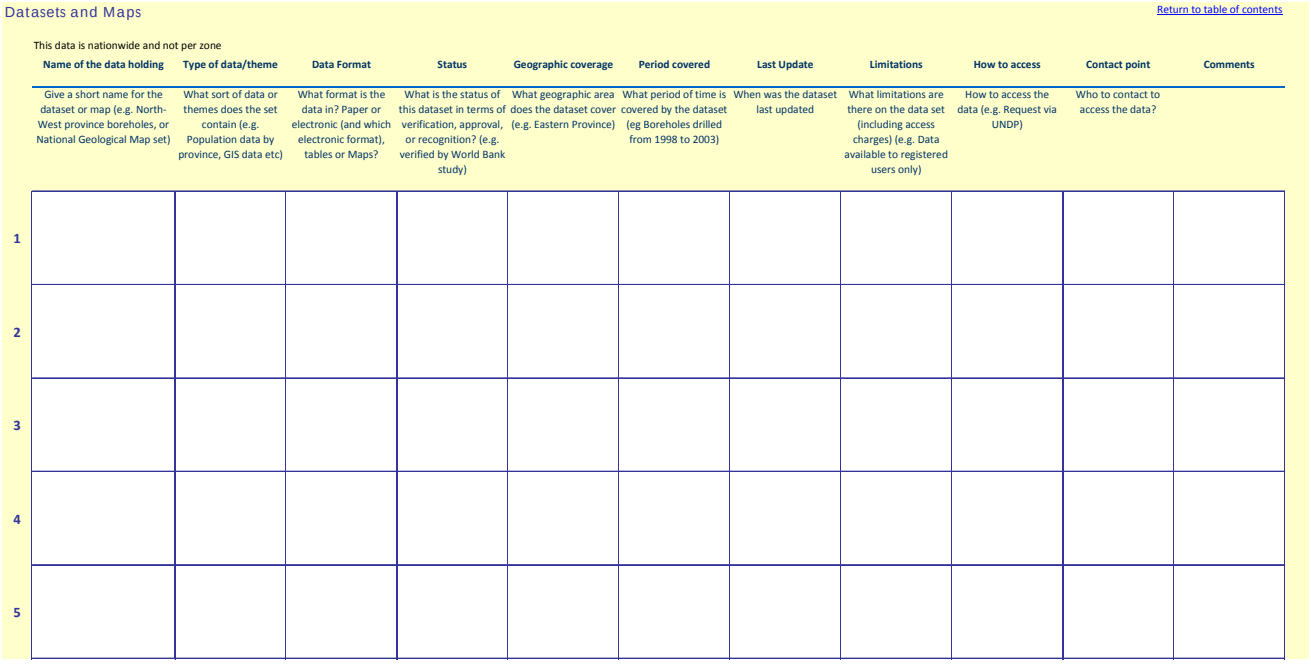
Q: Contact details?

Full contact details including email address and telephone number. Contact individuals should also be given for institutions.

Q: Notes?

This should include any specific notes about the individual or institution that are relevant to their use in emergencies. Notes might include the fact that a particular individual or institution has been retained by one of the actors in the WASH sector, or information about accessing their assistance.

Datasets and Maps



Datasets and Maps

Return to table of contents

This data is nationwide and not per zone

	Name of the data holding	Type of data/theme	Data Format	Status	Geographic coverage	Period covered	Last Update	Limitations	How to access	Contact point	Comments
	Give a short name for the dataset or map (e.g. North-West province boreholes, or National Geological Map set)	What sort of data or themes does the set contain (e.g. Population data by province, GIS data etc)	What format is the data in? Paper or electronic (and which electronic format), tables or Maps?	What is the status of this dataset in terms of verification, approval, or recognition? (e.g. verified by World Bank study)	What geographic area does the dataset cover (e.g. Eastern Province)	What period of time is covered by the dataset (eg Boreholes drilled from 1998 to 2003)	When was the dataset last updated	What limitations are there on the data set (including access charges) (e.g. Data available to registered users only)	How to access the data (e.g. Request via UNDP)	Who to contact to access the data?	
1											
2											
3											
4											
5											

Figure 16: Example of the Datasets and Maps page of the background data tool. Note: For illustration only, consult the tool to read the text.

This is a set of straightforward questions about different data-sets and maps

that might be of use to a WASH response. A dataset is simply a fancy name for a set of data. Examples of datasets that might be useful for WASH agencies include:

- Government and other databases of water resources.
- Census figures.
- Survey data from surveys on any aspect of the WASH sector.
- Trade directories dealing with the WASH sector.
- Topographical and geological maps.

Q: Name of the data holding: Give a short name for the dataset (e.g. North-West province boreholes)?

This should be the name by which the data holding is commonly known, such as *National Geological Map series A*, or *Coastal Province Spring database,* or the *Water-drilling yearbook*.

Q: Types of data/themes: What sort of data or themes does the set contain (e.g. Population data by province, GIS data etc)?

This describes the topic of the data in the dataset. This is the main subject of the dataset, be it borehole locations, borehole pump test data, hygiene beliefs and practices etc.

Q: What format is the data in? Paper or electronic (which electronic format?)

Older data sets may be available only in paper format. This may also be the case for sensitive data like mapping or geological data. If the data is in electronic format, you need to indicate what format it is in as one of the problems with electronic data is the number of different (and quickly obsolescent) data formats.

Q: Status: What is the status of this dataset in terms of verification, approval, or recognition? (e.g. verified by World Bank)?

This question addresses the current status of the dataset. Is the dataset officially approved or is it only informal "grey data". Sometimes data may not be officially approved for political reasons.

Q: Geographic coverage: What geographic area does the dataset cover (e.g. Eastern Province)?

This question simply identifies the geographic area covered in the dataset. Be aware that the coverage of a dataset may change over time (a database may have gained or lost provinces since first being established), and this should be highlighted if this is the case.

Q: Period covered: What period of time is covered by the dataset (eg Boreholes drilled from 1998 to 2003)?

Even data that is decades old can be very useful. An example of this was spring stream data in Albania which helped in deciding which spring should be used for a refugee camp in the Kosovo crisis in 1999, as one spring was far less likely to dry up than the others. Data like borehole drilling logs never go

out of date.

Q: Last update: When was the dataset last updated?

This can be important for some types of data. Population data goes out of use very quickly. Surface stream data can change significantly over time, as can well yields (but not well geology).

Q: Limitations: What limitations are there on the data set (including access charges) (e.g. Data available to registered users only)?

Datasets may be subject to a number of limitations as to access or to quality.

Q: How to access: How to access the data (e.g. Request via UNDP)

Whom should readers contact to access the data?

Q: Contact point: Who to contact to access the data?

This is the name, email, and phone number of the person that readers who want to access the data will need to contact.

Q: Comments

These are general comments on the database including any comments on the quality of the dataset that has not been noted in earlier questions - (e.g. Oxfam report that borehole location data before 1998 is not reliable.)

Internet Resources

Internet resources were added to the resource list after the validation of the tool in Guinea.

In Guinea, during a crisis, OCHA found that some agencies were providing updates to headquarters - which posted them on ReliefWeb - that they were not copying to the local OCHA office. Internet access was vital to keep track of what agencies were doing.

The same can be true in situations where unsettled security discourages agencies from attending coordination meetings.

Other web sites may be useful sources of information for planning a response etc. The emphasis here is on country-specific sites rather than generic sites.

Q: Name of website

This is the common name of the website. An example would be *"National Census Data for the Maldives"*.

Q: Type of information available on this site

This is a short description of the information available on the site, for example *"This is the introduction page to the 2000 Population and Housing Census for the Maldives. Simply follow the links for full summaries of the census data."*

Q: URL - the address of the website

This is the address of the webpage:

http://www.planning.gov.mv/publications/Pop_housing_census2000/index_cr.htm

Q: *Notes*

The notes on the site. These could include alternative web addresses for when the primary site is not available or some other useful information. *"The information on the site is duplicated on the census CD-ROMs available from the Ministry of Planning."*

Appendix C: Notes on the agency capacity tool

This tool is available as a spreadsheet from the Global Wash Cluster.

The Introduction

This page simply introduces the tool, before asking for two things:

- Contact details for the person filling the form.
- If there is any information that the agency would prefer not to share with other WASH group members.

This page also includes a table of contents with links for accessing other pages.

Some members of the WASH cluster may not have an operational role. They can still fill the tool, but the sheets on staff, stocks, and finance are less relevant for them.

WASH staff

Staff are often a critical resource in emergency response. The approach here is to define what your current staffing level is for the area under review and then to ask what staff you would expect to make available.

The form has two components:

- Current staffing levels
- WASH staff for emergencies

Current staffing levels

The table asks about three general categories (technicians, engineers, and WASH coordinators), and four sub categories of staff (water skills only, sanitation skills only, sanitation and water skills, and hygiene skills):

1. Technicians or hygiene promoters (either holding a formal certificate or diploma and able to manage and implement projects in their technical area) or skilled or semi-skilled staff (without an academic qualification, but with training to work in a particular area) with:
    a. Water skills only
    b. Sanitation skills only
    c. Both Water and Sanitation skills
    d. Hygiene skills
2. Engineers-hygiene promoters and managers (holding a degree level qualification and able to design, set-up, and manage projects in their technical area) with:

a. Water skills only
b. Sanitation skills only
c. Both Water and Sanitation skills
d. Hygiene skills

3. Wash Coordinators

Q: Directly employed now

This notes the number of the staff in the different categories who are directly employed by your agency.

If staff have skills in a different combination from the sub categories then they should be distributed between the groups. For example, if you have three sanitation and hygiene expert at degree level then you should put one and a half persons in the hygiene skills box and one and half persons in the *sanitation only* skills box

Q: Employed by directly funded partners

This is the number of staff that are employed by partners on projects which you are directly funding **if** those partners are not represented in the WASH group. Clearly if your partners are included in the WASH group, they will include this staff I their own capacity assessment and you including them as well would lead to double counting.

Q: Part of the country where they work

This gives the area or areas of the country where the given staff work. This is to given an idea of what the mobilisation times.

Q: Remarks or comments

This is a space for any comments that you may have on the staff or their likely availability or skills. For example *"Half of these have been trained in the installation of emergency water systems"*

Available for emergencies

The form asks what percentage of your current staff you could make available for five different types of emergency:

- an emergency in your area of operations affecting 5,000 or more people
- an emergency anywhere in the country affecting 15,000 or more people
- an emergency anywhere in the country affecting 50,000 or more people
- an emergency anywhere in the country affecting 500,000 or more people
- an emergency in a neighbouring country affecting 500,000 or more people

The scales of emergency are given as it is expected that different scales of

emergency will lead to different responses by agencies. The last category applies only to directly employed or locally recruited staff. This is included because regional agreements between neighbouring countries can be a useful way of rapidly building up staff numbers in emergencies.

The numbers that are expected here are very approximate percentages. It is realised fully that the number actually available will depend on a number of factors including existing commitments and the availability of funding that would be available for the emergency. The percentage is only an estimate of the number of staff that you would expect to be available.

Q: From our own directly employed staff

The number of staff should be given as a percentage of the number of directly employed staff in the column above.

Q: From directly funded counterparts

The number of staff should be given as a percentage of the number of partner staff in the column above.

Q: From local recruitment specifically for the emergency

This is given as a percentage of your directly employed staff. For example if you have ten directly employed WASH staff listed, and you would expect to hire another 20 in an emergency affecting 500,000 or more people, then the number to fill in here is 200%. If you though that you would only hire five additional staff for an emergency of 50,000 people or more than the number for that box is 50%.

Q: From regional or international emergency teams - As a % of your directly employed staff

Many agencies have regional or international emergency teams. Again the answer here depends on how large a team would be deployed in emergencies of different scales. For example, if you thought that only two staff would be sent to help you deal with an emergency affecting 50,000 people, and you already have ten directly employed WASH staff of technical level or higher, then the number to fill here is 20%.

WASH stocks

This is only addressed in a very rudimentary way as there is another project addressing this. After staff, stocks are another vital element in emergency response as the availability of stocks means that agencies can go to work straight away instead of having to wait for procurement.

Q: Stock Item Category - Overall category of stock item

This question presents a drop down list for the general category of stock items held. This list is drawn from the look-up page of the workbook. The present contents of this list are:

- Borehole pumps
- Engine powered water pumps

- Family hygiene kits
- Health Education Training Materials
- Household water containers
- Household water treatment systems or supplies (1 month)
- Latrine slabs
- Percussion tool drilling rigs
- Pipes
- Rotary drilling rigs to 150m
- Rotary drilling rigs to 500m
- Soap
- Vector control equipment
- Water purification plant
- Water storage tanks/bladders
- Water Tankers
- Well cleaning pump sets
- Other

The general category list is used to establish consistent units for counting the inputs of different agencies.

Q: Item Details - Detailed description of item

This if for a free-form description of the item. For example in the case of water tankers you might include towed bowers of 1,500l as on item, and truck mounted tanks of 6,000l as another. The unit in both cases is m^3 of tanker volume rather than the number of tankers.

Q: Unit

The unit is automatically filled in on the spreadsheet when you select the category. This is done to ensure that descriptions are consistent. For example the unit for water storage tanks and bladders is not number of tanks, but cubic metres of storage. This is to allow 5,000 litre bladders ($5m^3$) to be added to 90,000 ($90m^3$) tanks without creating major problems to give an idea of the total amount of storage. However, you would list both of these items separately even though they fall into the same category.

Q: Quantity (Nationally, Regionally, Internationally, and from suppliers)

This is simply the quantity of the item that you could make available. The number should be given in terms of the units for the category

Q: Delivery time - (Nationally, Regionally, Internationally, and from suppliers)

How long you would expect to take to deliver the stock to a transporter within the country (including any days for customs clearance and internal processing).

Q: Who can sign off - (Nationally, Regionally, and Internationally)

Who has the authority to release the stocks? This question is intended not only to make clear who had sign-off authority, but also to ensure that the agency filling the form has found out what restrictions apply to their contingency stocks. In some cases contingency stocks may need donor sign-off before use.

This question does not apply to suppliers.

Q: Your notes?

Any notes that you might have, about the stock item or their location or condition. For example *"The pumps were previously used during the response to the 2007 floods, but have been refurbished in the dealer's workshop and are in good condition"* or *"These items are stored in our warehouse in Port City".*

Financial Preparedness

Finance is another of the three key elements of emergency response. Without funds, operations cannot start. This page asks about the different emergency funds that a department or agency can access.

Q: Short name for the emergency fund

This is how the fund is commonly referred to. This could be Treasury Fund for Emergencies, HQ Catastrophe Fund etc.

Q: Is the fund available as a grant or a loan, or as a loan that may be turned into a grant?

Emergency funds can be in the form of:

- Grants, that do not have to be repaid to the fund.
- Loans that later have to be repaid to the source (typically from other emergency funding).
- Loans that may be turned into grants. Some emergency loans can be turned into grants on a discretionary basis. This avoids problems where there is insufficient other funding to repay emergency loans.

Q: Where is the fund nominally held (Ministry of Finance, headquarters etc)

Ask about the geographical (New York) or administrative location (Prime Minister's Office) that the fund is controlled from.

Q: How large is the fund (in USD)?

The total size of the fund. Typically this will be the annual size of the fund. If ther are limits on grant sizes these should be stated in the notes.

Q: Who has to sign off on the use of the fund?

Whose agreement is needed to sign off on the funds. Sometime this rests with the chief executive or with a minister for amounts with delegated authority to others for smaller amounts.

Q: How long does it usually take to access funds, including document preparation etc.?

What is the total time between deciding to apply for funds and receiving funds in the project account? Include the time needed to reach a consensus for joint funding applications.

Q: How many times has this fund been used in the last five years?

This is a test of whether the funds are a living instrument or whether they are a theoretical possibility that is rarely used. Low rates of use may spring for

very strict requirements or cumbersome procedures.

Q: Notes

Have you got any general comments on this fund? This could include limits on the use of the fund (for example "*Fund may only be used if a formal emergency is declared by the Government or the US State Department*").

Resource People and Institutions

This page is intended to capture the names of key individuals and institutions with areas of specialist knowledge in the WASH sector. Such individuals may include;

- Consultants, staff, or officials who was worked for many years in the national WASH sector and have taken part in most of the major studies or the sector.
- University professors or academics who have studied one part of the sector in detail.
- Consultants, staff, or officials with very detailed knowledge on one part of the sector.

The aim is not to identify every knowledgeable person in the sector but only those who are regarded as the main sources of information on the sector.

Key institutions may include:

- Documentation centres and technical libraries.
- Intuitions studying a particular part of the WASH sector.
- Academic institutions with a specific WASH sector competence.

Again, the aim is not to list every possible institution, but to identify those which are the key information sources.

Q: Name of individual or institutions?

This is the full name of the institution or individual. The acronym or short title by which the institution is most commonly known should also be given.

Q: Area of specialist knowledge?

What is the area of specialist knowledge of this individual or institution?

Q: Contact details?

Full contact details including email address and telephone number. Contact individuals should also be given for institutions.

Q: Notes?

This should include any specific notes about the individual or institution that are relevant to their use in emergencies. Notes might include the fact that a particular individual or institution has been retained by one of the actors in the WASH sector, or information about accessing their assistance.

Datasets and Maps

This is a set of straightforward questions about different data-sets and maps that might be of use to a WASH response. A dataset is simply a fancy name for a set of data. Examples of datasets that might be useful for WASH agencies include:

- Government and other databases of water resources.
- Census figures.
- Survey data from surveys on any aspect of the WASH sector.
- Trade directories dealing with the WASH sector.
- Topographical and geological maps.

Q: Name of the data holding: Give a short name for the dataset (e.g. North-West province boreholes)?

This should be the name by which the data holding is commonly known, such as *National Geological Map series A*, or *Coastal Province Spring database,* or the *Water-drilling yearbook*.

Q: Types of data/themes: What sort of data or themes does the set contain (e.g. Population data by province, GIS data etc)?

This describes the topic of the data in the dataset. This is the main subject of the dataset, be it borehole locations, borehole pump test data, hygiene beliefs and practices etc.

Q: What format is the data in? Paper or electronic (which electronic format?)

Older data sets may be available only in paper format. This may also be the case for sensitive data like mapping or geological data. If the data is in electronic format, you need to indicate what format it is in as one of the problems with electronic data is the number of different (and quickly obsolescent) data formats.

Q: Status: What is the status of this dataset in terms of verification, approval, or recognition? (e.g. verified by World Bank)?

This question addresses the current status of the dataset. Is the dataset officially approved or is it only informal "grey data". Sometimes data may not be officially approved for political reasons.

Q: Geographic coverage: What geographic area does the dataset cover (e.g. Eastern Province)?

This question simply identifies the geographic area covered in the dataset. Be aware that the coverage of a dataset may change over time (a database may have gained or lost provinces since first being established), and this should be highlighted if this is the case.

Q: Period covered: What period of time is covered by the dataset (eg Boreholes drilled from 1998 to 2003)?

Even data that is decades old can be very useful. An example of this was spring stream data in Albania which helped in deciding which spring should

be used for a refugee camp in the Kosovo crisis in 1999, as one spring was far less likely to dry up than the others. Data like borehole drilling logs never go out of date.

Q: Last update: When was the dataset last updated?

This can be important for some types of data. Population data goes out of use very quickly. Surface stream data can change significantly over time, as can well yields (but not well geology).

Q: Limitations: What limitations are there on the data set (including access charges) (e.g. Data available to registered users only)?

Datasets may be subject to a number of limitations as to access or to quality.

Q: How to access: How to access the data (e.g. Request via UNDP)

Whom should readers contact to access the data?

Q: Contact point: Who to contact to access the data?

This is the name, email, and phone number of the person that readers who want to access the data will need to contact.

Q: Comments

These are general comments on the database including any comments on the quality of the dataset that has not been noted in earlier questions - (e.g. Oxfam report that borehole location data before 1998 is not reliable.)

Internet Resources

Internet resources were added to the resource list after the validation of the tool in Guinea.

> *In Guinea, during a crisis, OCHA found that some agencies were providing updates to headquarters - which posted them on ReliefWeb - that they were not copying to the local OCHA office. Internet access was vital to keep track of what agencies were doing.*
>
> *The same can be true in situations where unsettled security discourages agencies from attending coordination meetings.*

Other web sites may be useful sources of information for planning a response etc. The emphasis here is on country-specific sites rather than generic sites.

Q: Name of website

This is the common name of the website. An example would be *"National Census Data for the Maldives"*.

Q: Type of information available on this site

This is a short description of the information available on the site, for example *"This is the introduction page to the 2000 Population and Housing Census for the*

Maldives. Simply follow the links for full summaries of the census data."

Q: URL - the address of the website

This is the address of the webpage:

http://www.planning.gov.mv/publications/Pop_housing_census2000/index_cr.htm

Q: *Notes*

The notes on the site. These could include alternative web addresses for when the primary site is not available or some other useful information. *"The information on the site is duplicated on the census CD-ROMs available from the Ministry of Planning."*

Appendix D: Notes on the sector capacity tool

This tool is available as a spreadsheet from the Global Wash Cluster.

The sector capacity tool has three pages on the overall emergency environment, on WASH planning, and on the functioning of the WASH sector.

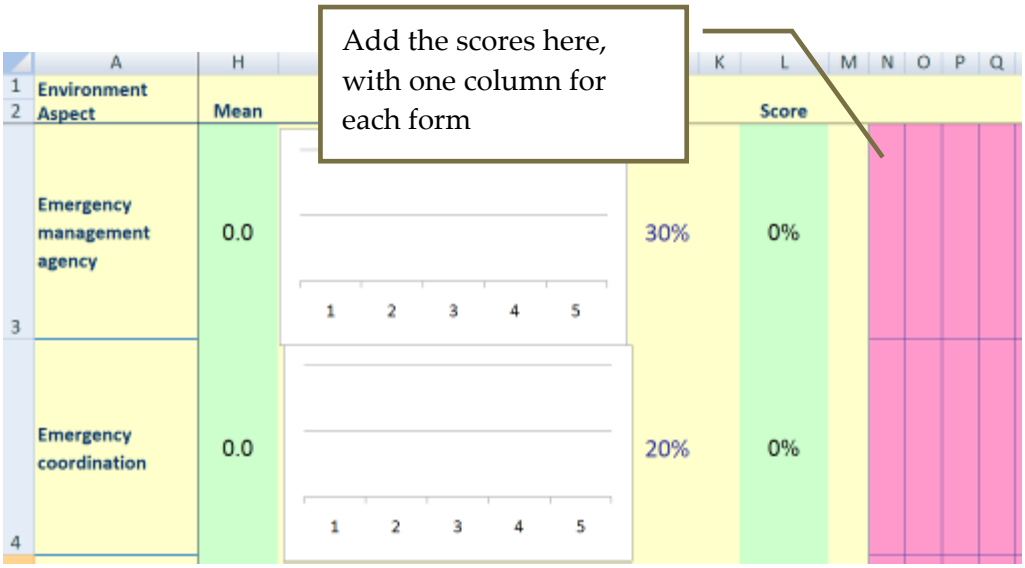
Each of the pages has from five to seven topics and each topic has five statements. Users have simply to pick the statement that they consider most closely represents the actual situation in the country and enter its number in the scoring box. If they are divided between two statements then they can enter a fractional number as the score. For example if they consider that the truth lies between statement 4 and statement 5, then they can enter 4.5 as the score for that topic.

Environment Aspect	For the aspects on the left 1	2	3	4	5
Emergency management agency	There is no designated emergency response agency	There is an emergency management agency, but it does not have enough resources to carry out its functions	There is an emergency management agency with some resources, but its role is disputed by some departments	There is an emergency response agency whose responsibilities are clear, but relations are not as strong as they should be	There is an emergency response agency whose responsibilities are clear, which has good relations with the main actors
Emergency coordination	The emergency coordination structure will develop as needed in any emergency	There is a new emergency coordination structure	There is a well established emergency coordination structure but only some WASH players are represented	There is a well established emergency coordination structure in which all the WASH players are represented	There is a well established and tested emergency coordination structure in which all the WASH players are represented

Figure 17: Sample statements from sector capacity tool.

The normal procedure is to distribute the forms and ask participants to fill them in without discussion. Then collect the forms and distribute another set for recording the group consensus.

While the group are discussing their consensus score you can add the scores into the spreadsheet.



As you fill in the numbers the histograms automatically track the distribution of numbers. If you enter 2.5 half a point is added to column two of the histograms and half a point to column three.

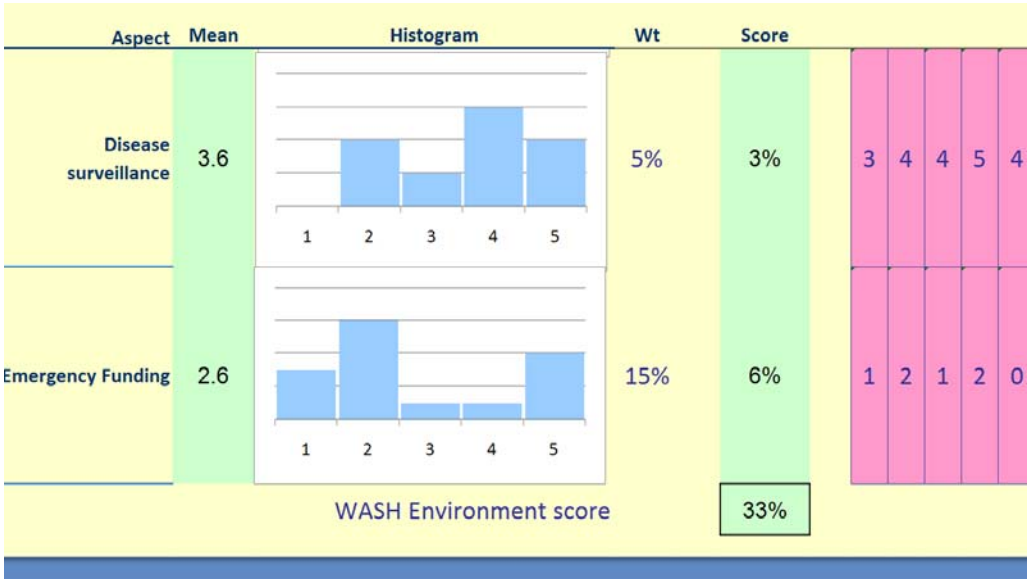
You can then project the histograms using a data projector, but it is usually easier to copy the histograms and paste them as images into a PowerPoint presentation.

You can then discuss why there is a range of views across the group for some issues and good agreement for others.

Each of the topics on each sheet has a different weighting. In the example below, disease surveillance is weighted to provide 5% of the overall score and emergency funding to provide 15% of the overall score.

The spreadsheet calculates an intermediate score for each topic as percentage of the maximum possible score. A score of 1 given 0% and a score of 5 gives 100%. A mean of the individual scores of 3.6 for disease surveillance gives a percentage score of 65%. When this is multiplied by the weighting (5% for disease surveillance) this give a contribution of 3% to the overall score.

The overall score is shown at the bottom of the sheet.



These overall scores are useful for recording how the group's perceptions of

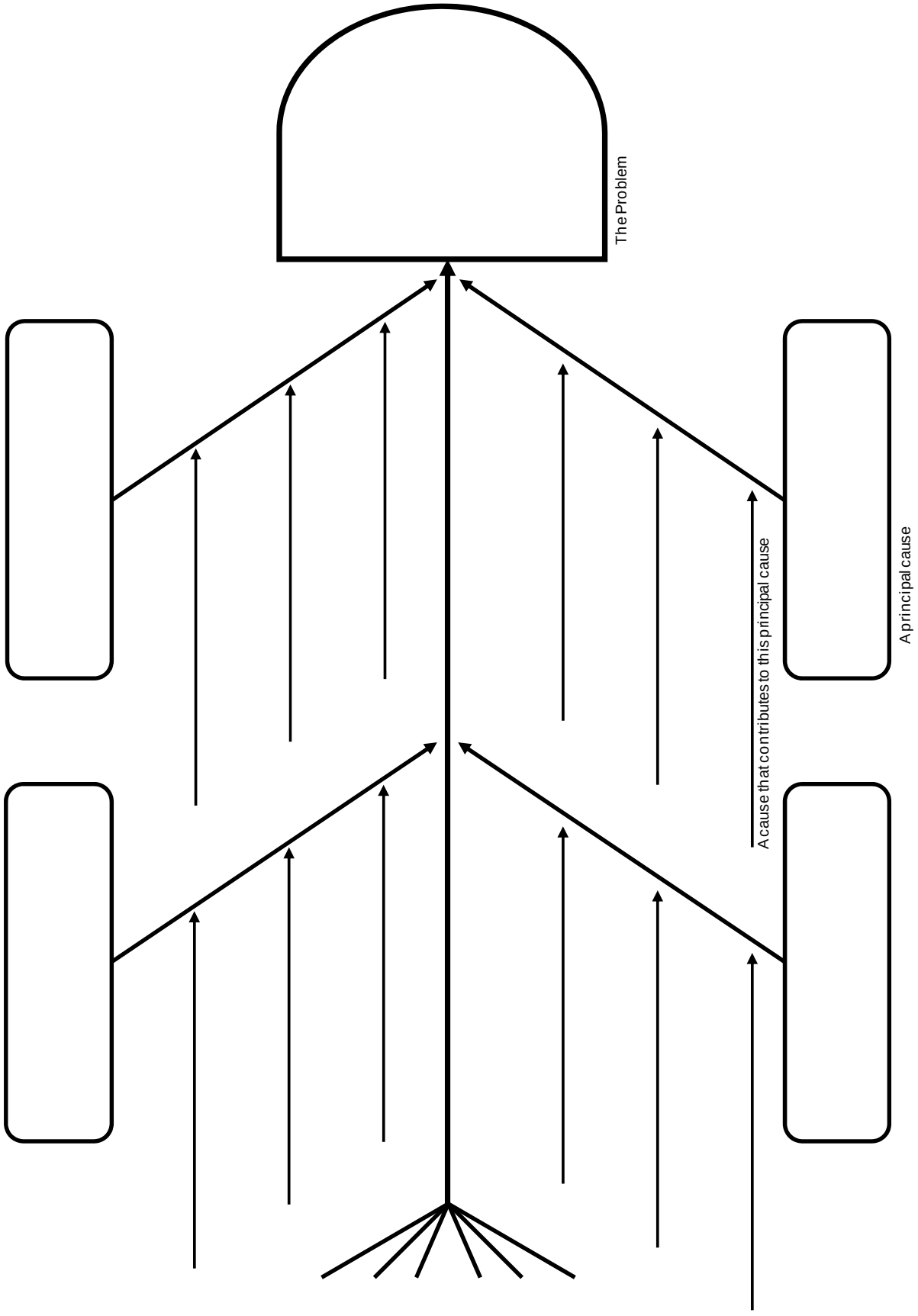
sector capacity change over time. The scoring for individual topics serves as a good starting point for discussing how the score could be improved.

In the validations, scores were typically around the 40% mark for most countries.

This tool is very useful for provoking discussion about the state of the WASH sector as groups debate which statement most accurately depicts the situation. It is this discussion, and it contribution to the process, that is probably of greater interest than the numerical scores.

The main value of the numerical scores is for comparing the views of sector members over time. However, even this data must be interpreted carefully. Falling scores could indicated higher expectations rather that poorer performance.

Appendix E: Blank Ishikawa Diagram



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