

**LEARNER'S  
GUIDE**



**TECHNICAL COMPETENCY UNIT**



**ADM.TEC  
021.1**

**Conduct In-depth Analysis on WASH  
in Humanitarian Settings**



**ASCEND**

**ASEAN Standards and Certification  
for Experts in Disaster Management**

## ASEAN Standards and Certification for Experts in Disaster Management

# CONDUCT IN-DEPTH ANALYSIS ON WASH IN HUMANITARIAN SETTINGS

ADM.TEC.021.1

### Learner's Guide



ONE ASEAN  
ONE RESPONSE



#### Project Sponsors:



The Association of Southeast Asian Nations (ASEAN) was established on 8 August 1967. The Member States are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam. The ASEAN Secretariat is based in Jakarta, Indonesia.

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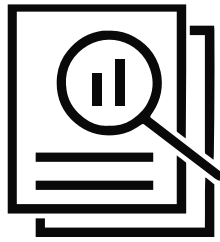
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ASCEND programme and  
Toolbox:

# Introduction



**ASCEND**

**1.1**

## The ASCEND Programme

Southeast Asian governments, through the ASEAN Committee on Disaster Management (ACDM), continue to invest in strengthening disaster management systems for a more secure and resilient region. However, the compounding risks and increasing uncertainty of disasters in our new climate reality threaten to set back the socioeconomic development gains of ASEAN societies. Widespread and recurring disaster damages and losses can overwhelm national capacities and worsen regional transboundary effects.

The Declaration on One ASEAN One Response (OAOR) at the 2016 ASEAN Summit in Vientiane, Lao PDR, reaffirms ASEAN's vision to move towards faster and more integrated collective responses to disasters inside and outside the region. However, ASEAN's past experiences responding to large-scale disasters showed that realising the OAOR can be challenging. Various responders from different countries, institutions, organisations, and companies seek to contribute to the overall response. Their goodwill is appreciated, and several provide much-needed assistance. But ASEAN and affected Member States sometimes found it challenging to determine what knowledge and skills responders have and how they can effectively contribute to national and regional efforts.

Learnings from past experiences and shared commitment to realising the OAOR vision increased the need to develop regionally recognised Competency Standards and a certification process for disaster management professionals. The increased support led to initiatives that eventually created the ASEAN Standards and Certification for Experts in Disaster Management (ASCEND) Programme. ASCEND is now part of Priority 5: Global Leadership of the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Programme 2021-2025, a programme that envisions ASEAN as a global leader in disaster management.

**1.2**

## The objectives of ASCEND

- To enhance the capacity of the ASEAN countries in the implementation of ASCEND.
- To establish regionally recognised Competency Standards and assessment processes covering five professions in disaster management.



- To improve the capacity of the AHA Centre to serve as the ASCEND Secretariat.
- To promote understanding of the ASCEND Framework among the ASEAN Member States (AMS) and other ASEAN sectors in preparation for the inclusion of ASCEND into the ASEAN Mutual Recognition Arrangement (MRA).

## 1.3

# Advantages and benefits of an ASCEND certification

### For ASEAN

The ASCEND certification can assist Member States in ensuring that competent disaster management professionals handle emergency assistance and disaster relief across the region. It also supports mutual recognition of disaster management competencies to facilitate acceptance of external aid and faster response.

### For AHA Centre

ASEAN, a rapidly developing and hazard-prone region, will need more competent disaster management professionals. The ASCEND certification can narrow current knowledge and skills gaps. It can also enable stronger cooperation and interoperability between disaster managers in their home countries and across regions.

### For disaster management professionals

Disaster management professionals can use their ASCEND certification to promote themselves professionally and serve as evidence of their experience and qualifications. It can also make it easier for organizations to determine the ability of certificate holders to perform critical work functions of specific occupations in the disaster management sector.

These ASCEND toolbox documents support the ASEAN Member States in identifying, building the capacity of, and mobilising competent disaster managers across Southeast Asia that are highly capable of contributing to reducing disaster risks and disaster losses in the region through timely and effective response.



**1.4**

## The ASCEND Toolbox

A set of technical requirements must exist before it is possible to implement the ASCEND programme in participating ASEAN Member States. The first requirement is the ASCEND Competency Standards, containing forty-three (43) regionally recognised core and technical competencies in selected disaster management professions. The Competency Standards outline the work elements and performance criteria that guide for certification of disaster management professionals across the region.

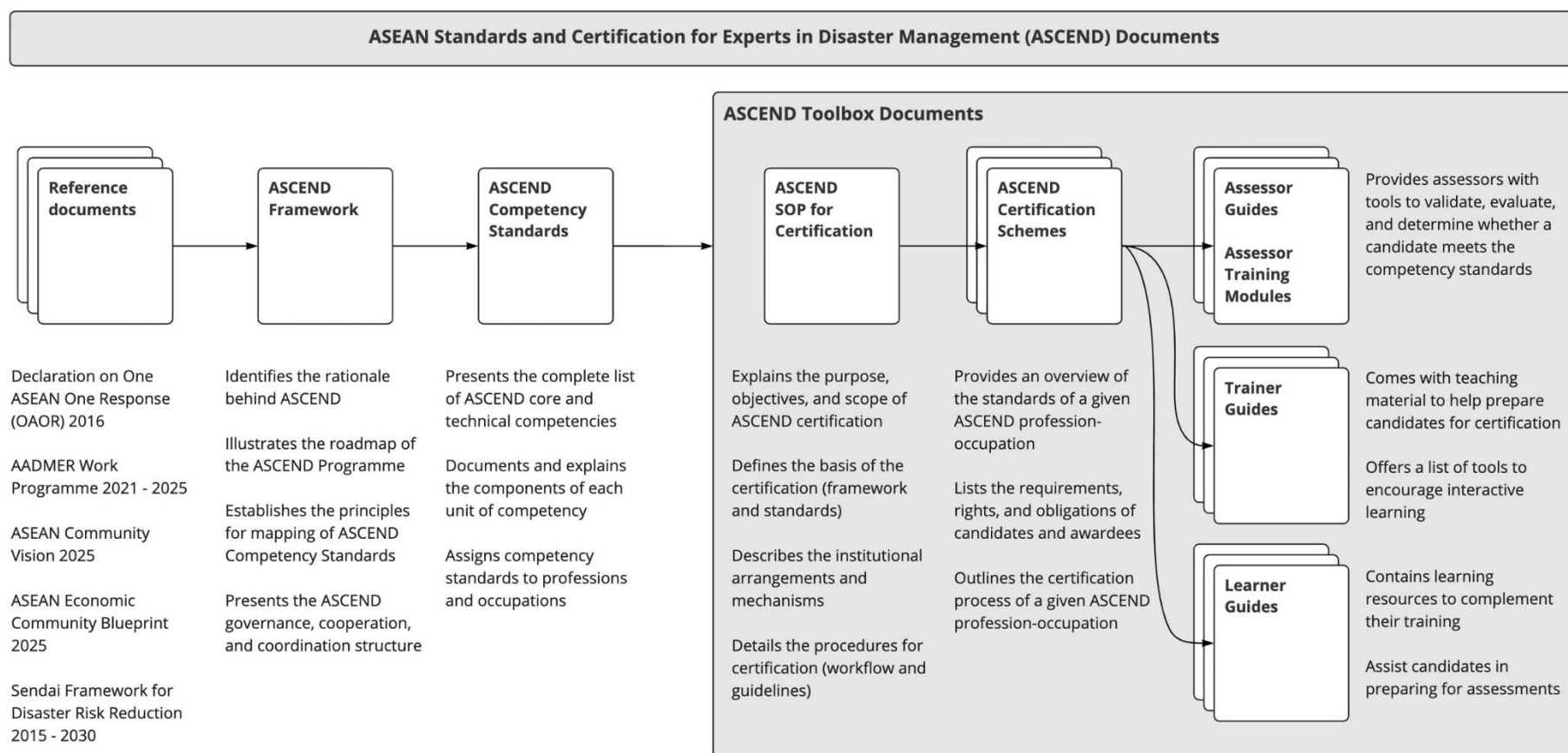
Another requirement is the development of an ASCEND Toolbox for five professions. These professions are Rapid Assessment, Humanitarian Logistics, Information Management, Water, Sanitation and Hygiene (WASH), and Shelter Management. The ASCEND Toolbox consists of an SOP, Certification Schemes, Assessor Guides, Trainer Guides, and Learner Guides. The ASCEND Competency Standards, approved by the ASEAN Committee on Disaster Management, are the primary basis of the Toolbox documents.

The SOP defines the basis of ASCEND, describes the institutional arrangements and mechanisms, and details the certification procedures. Certification Schemes present an overview of the standards of each profession-occupation and certification requirements, the rights and obligations of candidates and certificate holders, and general guidelines on the certification process. Assessor Guides provide assessors with tools to validate, evaluate, and determine whether a candidate meets the Competency Standards. Trainer Guides come with PowerPoint slides and presenter notes to help trainers prepare candidates for certification. It also offers a list of tools trainers may use to encourage interactive learning. Learner Guides assist candidates preparing for ASCEND certification in their chosen disaster management profession and occupation. It contains learning resources and complementary readings to help prepare them to undergo the required assessment.

The ASCEND Toolbox documents can assist the ASEAN Member States to identify, build the capacity of, and mobilise competent disaster managers across Southeast Asia to help reduce disaster risks and disaster losses in the region through timely and effective response.



*Figure 1: Overview of ASCEND Toolbox Documents*







# Learner's Guide

# Introduction for

# Candidates



## ASCEND

Welcome and thank you for your interest in pursuing an ASCEND certification. This Learner Guide is for you to read. It contains learning resources and helps you prepare for the required assessments: oral interviews, written tests, and observation checklists.

## Competency-based learning and assessment

**Competency** is the attitude and ability to use or apply one's experience, knowledge, and skills-sets to perform critical job functions in a defined work setting.

*Table 1: Competency areas and descriptions*

Competency area	Description
<b>Experience</b>	Refers to the qualifications of the candidate that make them eligible to pursue certification. It includes the candidate's formal education, work experience, professional training, and job-relevant life experiences.
<b>Knowledge</b>	Refers to what the candidate needs to know to make informed decisions on how to perform the work effectively.
<b>Skills</b>	Refers to the ability of the candidate to apply knowledge to complete occupational tasks and produce work outcomes or results at the standard required.
<b>Attitudes</b>	Refers to associated beliefs, feelings, motivations, and values that influence a candidate to make decisions and act according to occupational standards and the professional work setting.

There is one Learner Guide for each unit of competency. The Competency Standards and Unit Descriptor section of this document outlines the content you will be studying – broken down into elements and performance criteria that will be covered during training and assessed using competency-based methods. This guide contains a glossary of terms, a list of abbreviations, readings and activities, a self-assessment checklist, and information about the oral interviews and written tests.



**Competency-based methods** help ensure that the ASCEND certification process is relevant, valid, acceptable, flexible, and traceable – in alignment with the ASEAN Guiding Principles.

The relevance principle confirms that the ASCEND certification reflects the current professional needs in the disaster management sector. The validity principle relates to the consistency and equitability of the assessment process. The acceptability principle is about aligning the ASCEND certification to other disaster management professional standards and good practices. The flexibility principle refers to the responsiveness of the ASCEND certification to changes or differences in disaster management work settings and job requirements. The traceability principle ensures that evidence is sufficient to grant the ASCEND certification.

**Competency-based assessment (CBA)** is the process for evaluating whether a professional is qualified and competent to perform in a particular occupation. CBA is used to determine if the candidate's experience, knowledge, skills, and attitudes meet the standards and performance criteria defined in a unit of competency.





# ASCEND Competency Standards and Unit Descriptor



## ASCEND

**3.1**

## Competency standards

Competency standards are a set of industry-accepted benchmarks that defines the experience, knowledge, skills, and attitudes professionals need to perform well in an occupation. It also reflects the requirements of work settings and considers the developments in the disaster management profession.

**3.2**

## ASCEND Competency Standards

The ASCEND Competency Standards identify the key features of work in selected disaster management professions and performance standards professionals need to meet to be deemed competent. It also provides the list of the forty-three (43) core and technical competencies that serve as the basis for defining the regionally recognised disaster management qualifications across the ASEAN Member States. The five (5) professions covered by the ASCEND Competency Standards include Rapid Assessment, Humanitarian Logistics, Information Management, WASH, and Shelter Management. Under these professions are five (5) categories of occupations: Manager, Coordinator, Officer, Promoter, and Engineer. Overall, there are fifteen (15) profession-occupation combinations (e.g., humanitarian logistics manager, information management coordinator, WASH promoter).

Each ASCEND Competency Standard has its dedicated Toolbox documents: an SOP, Certification Scheme, Assessor Guide, Trainer Guide, and Learner Guide. Only one SOP applies to all profession-occupation combinations covered by the ASCEND certification. The Certification Schemes, one for each of the profession-occupation combinations. Both these documents align with the AQRF Level Descriptors, Section 4: Guiding Principles and Protocols for Quality Assurance of the AGP, and ASEAN Disaster Management Occupations Map. The Certification Schemes also outline the ASCEND competencies under selected professions and occupations, eligibility criteria, basic requirements and rights of candidates, and obligations of certification holders. Assessor Guides describe the components of particular competency standards and offer tools to determine the candidate's qualifications. Trainer and Learner Guides expound on a given competency standard's elements and performance criteria for learning and assessment preparation purposes.



The Toolbox documents may also serve as a reference for ASEAN Member States' seeking to develop and implement national-level competency-based certification processes based on their respective capacities and needs. The ASCEND Competency Standards and its derivative Toolbox documents will be reviewed and updated every five (5) years to ensure it reflects changes in the disaster management profession and remains relevant. Table 2 describes its main components.

*Table 2: Components of the ASCEND Competency Standards*

Component	Description
<b>Unit title</b>	Describes the critical work function to be performed in an occupation
<b>Unit number</b>	<p>A coding system to organise the units of competency. It also indicates the types of competency standards.</p> <ul style="list-style-type: none"> <li>ADM.<b>COR</b>.000.0 are core competencies. These are general professional knowledge and skills related to international humanitarian principles and disaster management standards, including ASEAN mechanisms and procedures.</li> <li>ADM.<b>TEC</b>.000.0 are technical competencies. These are specific knowledge and skills needed to perform effectively in work areas under their chosen disaster management profession and occupation.</li> </ul>
<b>Unit description</b>	Provides information about the critical work function covered by the unit.
<b>Elements</b>	Presents the occupational tasks required to perform the critical work function in the unit.
<b>Performance criteria</b>	Lists the expected outcomes or results from the occupational tasks to perform and the standard required.



**3.3**

## Unit descriptor

**Unit title** : **Conduct In-Depth Analysis on WASH in Humanitarian Settings**

**Unit number** : ADM.TEC.021.1

**Unit description** : This unit deals with skills and knowledge required to design and plan a project for a range of issues within WASH in emergencies.

### Element 1.

**Identify appropriate standards and practices related to public health in emergencies**

#### Performance Criteria

- 1.1 Adapt international and regional standards to be appropriate for the context
- 1.2 Incorporate WASH intervention into other sectors
- 1.3 Identify the specific needs of at-risk groups or the most vulnerable
- 1.4 Identify possible secondary hazards

### Element 2.

**Integrate early recovery and disaster risk reduction approaches in building community resilience as components of WASH programme**

#### Performance Criteria

- 2.1 Conduct risk analysis using appropriate data and techniques
- 2.2 Implement disaster risk reduction and preparedness measures to build resilience and capacity to response
- 2.3 Incorporate an early recovery strategy into WASH programme design



### **Element 3.**

## **Lead a WASH needs assessment as part of a multi-sector programme**

### **Performance Criteria**

- 3.1 Select appropriate assessment type based on the situation and the agreed timeline
- 3.2 Develop contextualised WASH assessment tools
- 3.3 Design need assessment work plan
- 3.4 Analyse data collected from the need assessment
- 3.5 Develop recommendations for WASH programme and produce need assessment report





## 3.4

# Glossary of Terms and List of Abbreviations

Terms and abbreviations	Descriptions
<b>AADMER</b>	ASEAN Agreement on Disaster Management and Emergency Response
<b>ACAPS</b>	Assessment Capacities Project
<b>ACDM</b>	ASEAN Committee on Disaster Management
<b>ADCAP</b>	The Age and Disability Capacity Programme
<b>AGP</b>	ASEAN Guiding Principles
<b>AHA Centre</b>	ASEAN Coordinating Centre for Humanitarian Assistance on disaster management
<b>ALNAP</b>	Active Learning Network for Accountability and Performance in Humanitarian. Action
<b>AMS</b>	ASEAN Member States
<b>AQRF</b>	ASEAN Qualifications Reference Framework
<b>ASCEND</b>	ASEAN Standards and Certification for Experts in Disaster Management
<b>ASEAN</b>	Association of Southeast Asian Nations
<b>CBA</b>	Competency-Based Assessment
<b>CDC</b>	Centres for Disease Control and Prevention
<b>CWGER</b>	Cluster Working Group On Early Recovery
<b>DRM</b>	Disaster Risk Management



<b>ECB</b>	Emergency Capacity Building
<b>ECHO</b>	European Commission Humanitarian Aid Office
<b>EM-DAT</b>	Emergency Events Database
<b>GFDRR</b>	Global Facility for Disaster Reduction and Recovery
<b>GIS</b>	Geographical Information Systems
<b>GPS</b>	Global Positioning System
<b>ICRC</b>	International Committee of the Red Cross
<b>INGOs</b>	International Non-Governmental Organization
<b>IRFC</b>	International Federation of Red Cross and Red Crescent Societies
<b>KNFA</b>	Korean National Fire Agency
<b>LGBTQ</b>	Lesbian, Gay, Bisexual, Transgender, Queer and/or Questioning
<b>MIRA</b>	Multi-sector Initial Rapid Assessment
<b>MRA</b>	Mutual Recognition Arrangement
<b>NGOs</b>	Non-Governmental Organization
<b>OAOR</b>	One ASEAN One Response
<b>ODI</b>	Overseas Development Institute
<b>PDNA</b>	Post Disaster Needs Assessment
<b>PRA</b>	Participatory Rural Appraisal
<b>RA</b>	Risk Analysis
<b>RRA</b>	Rapid Rural Appraisal



<b>RRD</b>	Responsiveness for Relief and Development Foundation
<b>SOP</b>	Standards Operating Procedures
<b>UNDP</b>	United Nations Development Programme
<b>UNHCR</b>	United Nations High Commissioner for Refugees
<b>UNISDR</b>	United Nations International Strategy for Disaster Reduction Secretariat
<b>UNOSAT</b>	United Nations Satellite Centre
<b>USAID</b>	United States Agency for International Development
<b>WASH</b>	Water, Sanitation and Hygiene





# Unit Readings and Activities



**ASCEND**

**4.1**

## **Element 1. Identify appropriate standards and practices related to public health in emergencies**

### **1.1 Adapt international and regional standards to be appropriate for the context**

#### **A. Introduction**

People affected by crises and disasters are susceptible to diseases that can cause death. Inadequate sanitation, poor hygiene, and insufficient water supplies can contribute to disease outbreaks. Designing and implementing WASH programmes can help reduce and manage public health risks during a crisis or after a disaster.

Standards are essential to programme development and implementation, especially those applied to practices related to public health in emergencies like WASH. Using standards helps ensure that plans and activities associated with WASH enhance the wellbeing and support the recovery of disaster-affected communities. This section will explore several international and regional standards relevant to WASH.

#### **B. Standards**

Standards used in public health emergencies also apply to disaster preparedness, response, and recovery activities. Managers of WASH programmes must have a good understanding of these international and regional standards and indicators.

Standards are different from objectives and indicators. A standard defines the levels of performance required of those involved in a given work area and the acceptable conditions of those benefitting from their activities. An objective is a specific result that individuals, teams, and organisations set out to achieve. An indicator is a variable scale for objectively measuring to what extent efforts meet the desired outcome set by a standard.



## C. International Standard

The Sphere Project includes international water, sanitation, and hygiene (WASH) activities. Sphere Standards promote people's right to live with dignity, protection and security and the right to receive humanitarian assistance based on need.

There are six (6) international WASH standards according to the [Sphere Project \(2018\)](#):

- **Hygiene Promotion**
  - Standard 1.1 Hygiene promotion
  - Standard 1.2 Identification, access and use of hygiene items
  - Standard 1.3 Menstrual hygiene management and incontinence
- **Water Supply**
  - Standard 2.1 Access and water quantity
  - Standard 2.2 Water quality
- **Excreta Management**
  - Standard 3.1 Environment free from human excreta
  - Standard 3.2 Access to and use of toilets
  - Standard 3.3 Management and maintenance of excreta collection, transport, disposal and treatment
- **Vector Control**
  - Standard 4.1 Vector control at settlement level
  - Standard 4.2 Household and personal actions to control vectors
- **Solid Waste Management**
  - Standard 5.1 Environment free from solid waste
  - Standard 5.2 Household and personal actions to safely manage solid waste
  - Standard 5.3 Solid waste management systems at the community level
- **WASH in disease outbreaks and healthcare settings**
  - Standard 6 WASH in healthcare settings

## D. National and Regional Standards

WASH programmes must adhere to national drinking water safety standards, sanitation codes, environmental protection measures, and other regulations. Many states have their national standards-making bodies. The national standards-making bodies of neighbouring states may also band together to establish regional standards. Unless the affected country makes exceptions, national standards take precedence over regional and international standards.



## E. Activity

Every state has different WASH-related standards. Research using the internet. List and briefly describe several of your country's national WASH-related standards applicable to a disaster context.

**Answer Box:**

---

## F. Summary

- A standard defines the levels of performance required of those involved in a given work area and the acceptable conditions of those benefitting from their activities.
- The Sphere Project (2018) divides international WASH standards into six (6) components:
  - Hygiene promotion
  - Water supply
  - Excreta management
  - Vector control
  - Solid waste management
  - WASH in disease outbreaks and healthcare settings
- Unless the affected country makes exceptions, national standards take precedence over regional and international standards.



## 1.2 Incorporate WASH intervention into other sectors

### E. Introduction

WASH managers need cross-sectoral knowledge and a deep understanding of how WASH programmes link to and affect other interventions provided to disaster-affected communities. They will also need to know how to work with stakeholders from different professional backgrounds and disciplines to ensure that communities in disaster sites receive adequate, holistic, and integrated services.

The work of the WASH sector supplements the activities of other sectors. For instance, temporary shelters, healthcare facilities, and community schools cannot function without the provision and management of WASH facilities.

### F. WASH Intervention

The speed, scale, and approach required for [WASH interventions](#) in an emergency are different from those used in development programmes. The needs of disaster-affected communities are urgent, and many people will need access to water and sanitation services simultaneously. Depending on the situation, there may also be a need to promote activities unfamiliar to the disaster-affected communities. Effective WASH interventions reduce the risk of disease transmissions and improve health outcomes.

The main components of emergency WASH include water, sanitation, and hygiene interventions. The following are thirteen (13) WASH interventions for emergencies:

- **Hygiene Promotion**

Hygiene interventions aim to educate the population about healthy practices that minimise the risk of acquiring and transmitting disease.

- **Hygiene promotion**

Disaster-affected communities need to be informed about the risk of disease and its transmission by communicating easy-to-understand and targeted hygiene messages. Hygiene promotion may be done at the community level, like in school, in groups, or at the household level.

Facilitating social mobilisation is key to effective hygiene promotion. Social mobilisation refers to activities that engage disaster-affected communities and encourage them to address the risks of disease and outbreaks using local solutions.





- **Hygiene kits**  
Hygiene kits are resources people in disaster-affected areas need to maintain good hygiene. Hygiene kits may include water filtration and treatment products, buckets, shampoo, soap, toothbrushes, toothpaste, and feminine hygiene products. Hygiene kits are often handed out as individual packages or together with other non-food items such as blankets and cooking pots.
- **Vector Control**  
Vector control is closely related to hygiene promotion. Effective hygiene promotion contributes to better vector control. Responders frequently carry out these two interventions in parallel.
  - **WASH package:** WASH package is a combination of interventions on water, sanitation and hygiene.
- **Well or spring repair**  
Providing disaster-affected populations access to clean and safe water is essential. A disaster can damage existing water sources or pollute them, making them no longer potable. There is rarely enough time for new water point construction during an emergency. Repairing or cleaning existing wells or springs are the most common interventions for water access.
  - **Pumping out saltwater intrusions:** Maintaining the proper balance between water pumped from an aquifer and the amount of water refilling it can help control saltwater intrusion (as measured by salinity or conductivity).
  - **Well disinfection:** Chlorine is used to disinfect contaminated wells.
- **Source-based water treatment**  
Source-based water treatment aims to improve water quality at the point of collection. Most source-based treatments use chlorine solution or tablets. They may also include processes that help to reduce water turbidity.
  - **Large-scale source-based water treatment:** Bulk water treatment involves systems in that agencies operate without needing the involvement of beneficiaries or users. These systems are typically capable of treating between 1,000 and 15,000 L of water per hour. Semi-permanent tanks or temporary bladders are also used for treatment and storage.



- **Small-scale source-based water treatment:** Small-scale source treatment occurs at the source and often involves one water container at a time through bucket chlorination and chlorine dispensers, among others.
- **Household water treatment**

Household water treatment interventions are used when affected populations have access to water, but the quality is inadequate. It also involves distributing buckets or jerrycans or buckets to promote the safe storage of treated water.

  - **Chlorine-based household water treatment:** In emergencies, the most commonly distributed household water treatment products are chlorine products. The effective treatment dose is determined by the initial water quality and the size of the container.
  - **Filtration-based household water treatment:** Water filters are easy to use and can remove harmful microbes larger than the filter's pore size.
  - **Other household water treatments:** Other household water treatments like solar disinfection and flocculation are less commonly applied during emergency responses.
- **Excreta disposal**

Sanitation interventions in emergency responses seek to minimize open defecation and improve faeces management through latrines or latrine alternatives. It reduces the exposure of disaster-affected communities to infectious waste and helps reduce disease transmission.

  - **Latrine:** Latrines are temporary or semi-permanent structures made of cement, plastic, bricks or local materials intended that isolate faeces from the environment. Latrines are designed for individual households or in clusters to accommodate large communities in camps.
  - **Latrine alternatives:** Latrine alternatives are used as a temporary solution in the initial days after an emergency when latrines cannot be installed yet.



- **Solid waste management and drainage facilities**

Solid waste management and drainage facilities are required to support hygiene promotion and vector control.

- **Environmental hygiene:** Environmental hygiene efforts protect populations from existing or new health risks by reducing disease transmission routes in the environment. Environmental hygiene interventions can include collecting rubbish, disinfecting household objects, or optimizing land drainage.

## G. Integrated WASH to Other Sectors

WASH interventions affect and are affected by other sectoral interventions. WASH links to [other sectors](#) such as:

- **Health**

WASH needs assessment should consider disaster impacts on healthcare facilities and community hygiene initiatives. Provision of water and sanitation services, as well as hygiene promotion activities, are often needed. WASH interventions must also assist in the disposal and safe management of healthcare waste and support vector-control strategies.

- **Nutrition**

Water consumption is crucial for nutritional health and is frequently a key component of food preparation. In post-disaster contexts, good (WASH) interventions help prevent diarrhoea that may cause malnutrition, particularly among children and the elderly.

- **Education**

WASH needs assessments must carefully consider disaster impacts on educational facilities. Educational facilities are often major distribution points for hygiene promotion among students and local communities. They are also used to provide healthcare when healthcare facilities are damaged or lack capacity. Water and sanitation facilities must be available in these facilities.

- **Environment**

WASH interventions affect the environment, and the environment shapes WASH activities. Environmental impacts should always be considered when constructing water and sanitation facilities. Poor management of environmental factors will reduce the effectiveness of WASH interventions.



- **Culture**

WASH interventions need to consider cultural aspects and norms surrounding communication and language, gender, age, religion and family dynamics, and other social issues. Male and female or children and adults have different post-disaster needs. Inefficient and unsustainable post-disaster interventions often lack consideration of socio-cultural conditions.

## H. Activity

There are many forms of WASH interventions. Give examples of the following water supply interventions:

- Well or spring repair
- Source-based water treatment
- Household water treatment

**Answer Box:**

## I. Summary

- The main components of WASH interventions are water, sanitation, and hygiene.
- WASH interventions during emergency response include pumping out saltwater intrusions, well disinfection, large-scale and small-scale water treatment, chlorine-based household water treatment, filtration-based household water treatment, installation of latrines and latrine alternatives, hygiene promotion, and provision of hygiene kits.
- WASH is closely related to other sectors like health, nutrition, education, environment, and culture.



## 1.3 Identify the specific needs of at-risk groups or the most vulnerable

### A. Introduction

In a disaster, some population segments will be more severely affected than others. It is crucial to identify these at-risk or vulnerable groups during emergency response because they usually have specific needs that differ from the general population.

### B. At-risk and Vulnerable Groups

Populations with large numbers of at-risk groups tend to suffer more damage and losses from disasters. [At-risk groups](#), also referred to as vulnerable populations, require special attention because traditional services cannot fully address their needs. Standard resources used during preparedness, response, and recovery efforts may not be accessible or applicable to them.

At-risk groups include:

- Children (boys and girls), especially young children
- Women, especially pregnant and lactating mothers
- Individuals with disabilities, physically and mentally
- Elderly
- LGBTQ
- Socio-economically disadvantaged minorities
- People with language barriers
- Undocumented immigrants and workers
- Prisoners

Many factors influence a person's or group's vulnerability to disaster. A person or group may fall into multiple categories. The following categories are most commonly accepted: socioeconomic status, age, gender, race and ethnicity, language and literacy, and medical history and disability.

### C. Specific needs of at-risk and vulnerable groups

Vulnerable groups are at higher risk of being affected by disaster impacts. There are [minimum standards](#) in fulfilling the needs of at-risk and vulnerable groups in humanitarian settings. These include:

- Respecting diversity
- Conducting humanitarian action based on need



- Ensuring all groups benefit from aid and relief
- Addressing any barriers and obstacles affecting access for at-risk and vulnerable groups
- Recognizing and maintaining the dignity of at-risk and vulnerable groups
- Promoting the inclusion and active participation of at-risk and vulnerable groups
- Recognize the vital role of carers

There are specific standards for WASH activities as outlined by [ADCAP \(2015\)](#). The table below presents a general guideline for identifying the specific needs of at-risk and vulnerable groups.

**Table 3:** *Minimum standards and actions for age and disability inclusion in WASH programmes*

WASH Standard	Standard	Actions
<b>WASH standard 1</b>	People with disabilities and older people and their carers are included in the design, implementation, monitoring, and evaluation of WASH services and facilities.	<p>Collect data disaggregated by sex, age, and disability</p> <p>Train WASH staff to recognize and handle the specific needs of at-risk and vulnerable groups</p> <p>Initiate discussions with at-risk and vulnerable groups to identify their specific needs, and encourage them to participate in assessments</p> <p>Include at-risk and vulnerable groups in WASH programme evaluation</p>
<b>WASH standard 2</b>	Information on WASH services and facilities is made available to people with disabilities, older people, and carers.	<p>Share information related to WASH activities to at-risk and vulnerable groups</p> <p>Train health/hygiene promoters in disability and age-awareness</p> <p>Inform at-risk and vulnerable groups about the hygiene kits and facilities provided</p>



WASH Standard	Standard	Actions
		Guide how to use WASH facilities for at-risk and vulnerable groups
<b>WASH standard 3</b>	People with disabilities, older people, and their carers have access to adequate water supply for drinking, cooking, and other domestic use.	<p>Ensure a minimum of 15 per cent of taps/water pumps are accessible for at-risk and vulnerable groups</p> <p>Make special arrangements for at-risk and vulnerable groups</p> <p>Monitor the water supply for at-risk and vulnerable groups</p>
<b>WASH standard 4</b>	People with disabilities and older people have access to latrine facilities appropriate to use safely and with dignity.	<p>Adjust the latrines and toilets based on universal design principles</p> <p>Conveniently locate handwashing facilities for at-risk and vulnerable groups</p> <p>Provide special facilities for at-risk and vulnerable groups in the latrines/toilets</p>
<b>WASH standard 5</b>	People with disabilities and older people and their carers have access to hygiene services, including an adequate supply of hygiene items appropriate for them to use safely and with dignity.	<p>Distribute additional hygiene kits needed for at-risk and vulnerable groups</p> <p>Ensure at-risk and vulnerable groups have appropriate sanitary materials</p> <p>Ensure the safety and privacy of WASH facilities</p> <p>Regularly monitor and evaluate the WASH needs for at-risk and vulnerable groups</p>

Source: ADCAP (2015)



## J. Activity

There may be people who have a higher risk of disaster impact in an emergency than others. List the groups of people who are included.

**Answer Box:**

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## K. Summary

- Populations with large numbers of at-risk groups tend to suffer more damage and losses from disasters. At-risk groups, also referred to as vulnerable populations, require special attention because traditional services cannot fully address their needs. Standard resources used during preparedness, response, and recovery efforts may not be accessible or applicable.
- Many factors influence a person's or group's vulnerability to disaster. A person or group may fall into multiple categories. The following categories are most commonly accepted: socioeconomic status, age, gender, race and ethnicity, language and literacy, and medical history and disability.
- Vulnerable groups are at higher risk of being affected by disaster impacts. There are minimum standards in fulfilling the needs of at-risk and vulnerable groups in humanitarian settings.





## 1.4 Identify possible secondary hazards

### A. Introduction

A hazard is different from a disaster. Hazard refers to a dangerous phenomenon that may cause adverse consequences. Disaster results from a hazard's effect on a society determined by the extent of their vulnerability to the hazard.

Hazards may be single, sequential, or combined in their origin and impacts. A primary hazard may trigger secondary hazards. It is important to consider secondary hazards because they may start a domino effect.

### B. Secondary hazards

A hazard is a physical event, phenomenon, or human activity that can cause large-scale negative impacts on society. It may result in loss of life, injury, property damage, social and economic disruption or environmental degradation.

Hazards often fall into two categories: natural hazards and human-made hazards. Natural hazards are those that occur due to environmental processes and changes. Human-made hazards are those caused by human activity. [Secondary hazards](#) arise as a result of a primary hazard event.

### C. Types of secondary hazards

Below is a list of primary hazards and the [secondary hazards](#) that may follow.

- **Earthquakes**

Earthquakes are natural geophysical events that occur on the earth's surface. Ground shaking and surface faulting are the main threats associated with earthquakes. But they can also trigger secondary hazards that may create more damage and losses than the initial earthquakes. These include landslides, tsunamis, dam failures, disruption of communications, electrical power and water services, chemical spills, and industrial fires due to explosions

- **Volcanic eruptions**

Magmas are superheated gases and molten rock beneath the earth's crust. They can escape to the surface and become lava during volcanic eruptions common in the highly seismic zones along the plate



boundaries. Secondary hazards associated with volcanic eruptions are earthquakes, landslides, mudflows (lahars), tsunamis, and the discharge of poisonous gases.

- **Typhoons**

Typhoons are the most dangerous, destructive, and deadly hydro-meteorological events. Depending on the category, their wind speeds may range from 74 miles/hour to 150 miles/hour or more. A typhoon can cause secondary hazards like floods, storm surges, and landslides.

- **Floods**

Floods are the most common natural hazard worldwide, triggered by prolonged rainfall, intense thunderstorms, and onshore winds. Floods can be either slow or fast-rising, lasting days or weeks. Secondary hazards that may result from flooding are coastal and soil erosion. Erosions increase the chance of future flooding, creating a vicious cycle of repeat flooding and further erosion. Other generative processes may cause rapid and widespread flooding, including avalanches, dam failure, landslides, levee breakage, and logjams.

- **Wildfires**

Wildfires pose a significant risk to people living near or working in the wilderness. Wildfires may reduce access to recreational areas, damage community infrastructures, and deplete cultural and economic resources in the long term. Secondary hazards following wildfires include deterioration of water quality and the emergence of invasive species. These worsen the effects of wildfires and impede recovery efforts.

## D. Identification of secondary hazards

- **Simple brainstorming** helps explore the potential [secondary hazards](#) to consider, especially with stakeholders from different backgrounds. Event and fault tree analyses can help stakeholders examine the sequence of events and the relationships.
- **Event trees** are used to investigate the outcomes that might occur due to a particular initiating event. There are two main methods to create event trees.

The first method examines the consequences of a single hazard. It then investigates the subsequent outcomes of those impacts until all possible secondary effects are listed.



The second method considers all of the events that might occur during a hazard scenario. This scenario-based technique begins with a timeline that depicts the disaster scenario from start to finish. It then considers other events throughout the disaster by tracing each event to its probable end state.

**Fault trees** differ from event trees. They focus on the end state or consequence and trace back to the possible initiating events that may have generated the result. There are two methods for fault trees.

The first method focuses on the possible causes of a single identified consequence, then on the subsequent causes of those causes. The process is repeated until all possible causes of the result are listed.

The second method maps the causes or initiating events of a consequence. This method selects a terminating consequence first and then refers to the timeline for any possible triggering events that might lead to that end state.

## E. Activity

Secondary hazards are consequences of a primary hazard event. Identify the possible secondary hazards from an earthquake and briefly explain how they can worsen disaster impacts.

**Answer Box:**



## F. Summary

- Secondary hazards arise as a result of a primary hazard event.
- Earthquakes, volcanic eruptions, typhoons, floods, and wildfires have different secondary hazards that may increase the damages and losses of the initial hazardous event.
- Simple brainstorming helps explore the potential secondary hazards to consider, especially with stakeholders from different backgrounds. Event and fault tree analyses can help stakeholders examine the sequence of events and the relationships.



**4.2**

## **Element 2. Integrate early recovery and disaster risk reduction approaches in building community resilience as components of WASH programme**

### **2.1 Conduct risk analysis using appropriate data and techniques**

#### **A. Introduction**

Risk results from the interactions between a hazard, people's exposure to that hazard, their levels of vulnerability and capacity to cope with the impacts of a hazard.

Risk analysis provides a model for examining these connections to assess the potential impacts of hazards to society and their probability of occurring. It focuses on two core concepts: hazard and vulnerability.

#### **B. Concept, Goal, and Products**

##### **Concept**

Aside from hazards, increasing attention is being paid to analysing societies' role, mode of production and living, and development model as potential disaster causes.

Disasters are no longer regarded as acts of God or nature's whims. Instead, they are considered a result of unsustainable social, political, and economic activities that increase the vulnerability of communities to hazardous events.

Risk analysis is a fundamental tool in disaster risk management used to investigate risk factors. It serves as the basis for planning and implementing measures to minimise disaster risks and their impacts.

[Risk analysis \(RA\)](#) involves analysing hazards, exposure to hazards, vulnerabilities, and coping capacities. Some consider the coping capacities of



populations as a component of vulnerability analysis. In contrast, others think it is a separate component of RA. In the definition below, coping capacities are considered part of vulnerability analysis.

- **Hazard analysis**

Identifies, documents, and examines the nature of hazards (e.g., natural, human-induced, biological, technological) and their causes and effects. It assesses the probability of occurrence and impact, given its intensity and duration, at a specific place and time in a given population. Understanding these types of information is essential for finding appropriate and effective ways to reduce and manage disaster risks.

- **Vulnerability analysis**

A type of analysis to study a system's (or an element's) ability to prevent, neutralize, resist, or absorb the effects of potentially hazardous events. The potential damages and losses from a hazardous event to a system or element determine vulnerability. Disasters may harm people (life, health, wellbeing, livelihoods), material assets (buildings, infrastructure), and the environment (ecosystem degradation, loss of natural resources).

## Goals

Risk analysis is a dynamic process that continuously responds to evolving hazards, vulnerabilities, and risks. The [goals](#) of risk analysis are:

- To involve the local stakeholders and communities of concern throughout the process and promote ownership
- To identify the hazards a given population is exposed to
- To know when and where hazardous events could occur
- To understand the potential damages and losses to a given population should the hazardous event occur
- To examine the vulnerabilities and coping capacities of the population exposed to the hazardous event
- To document and communicate the dangers and threats local stakeholders and communities face
- To develop and implement culturally appropriate and feasible preparedness, response, and recovery strategies, plans, and practices that will mitigate the impacts of hazards, lessen vulnerability, and strengthen coping capacities - in consultation with local stakeholders and communities
- To repeat the process and improve each time



## Expected Product

Highly advanced technologies for remote sensing and geographical information systems (GIS) have improved how hazards and vulnerability are analysed in recent years. But the common products used in risk analysis are hazard and risk maps.

They have usually classified into three (3) groups:

- **Hazard maps** provide information about potential hazards in a given place
- **Risk zone maps** provide information on the levels of exposure of a given place should a hazardous event occur
- **Risk maps** are risk zone maps that consider the potential impacts of a hazard on people, property, and the environment. They typically consider the physical aspects of vulnerability. These maps are used to develop other products, such as impact assessments and simulation models.

## C. Elements in Carrying Out a Risk Analysis

### Criteria for Determining the Methods in Applying Risk Analysis

The following questions are considered when conducting a risk analysis (RA) and determining the methods and techniques to be used:

- Is there political commitment to proactive risk reduction and disaster preparedness measures? Or emergency response and recovery efforts are more of the focus?
- Are there legal frameworks and institutional mechanisms for disaster risk management (DRM) that are coherent across sectors?
- Are there economic incentives and sufficient funding for implementing the DRM measures developed from the risk analysis?
- Are hazard-exposed populations well aware of the disaster risks they face?
- Are hazard-exposed populations interested and motivated to help in reducing disaster risk and managing their impacts?

The following points should also be considered when determining the methods for applying risk analysis (RA):



- Political commitment is necessary if DRM efforts are to be effective. DRM initiatives become successful when it receives sustained attention and continued investments from those who hold political power.
- Reliance on emergency response and recovery plans can hinder stakeholders' ownership and personal initiative of disaster risk management. While the capacity to cope and adapt to hazardous events is essential, it is always better to reduce their impact and prevent any damages and losses if possible.
- Disaster risk management is a multi-stakeholder effort. Legal frameworks and institutional mechanisms help facilitate cooperation among the various actors contributing to disaster risk management.
- It is essential to investigate or clarify: i) whether the aim is to reduce disaster risk at the local, national, or regional level and ii) whether the risk analysis (RA) is for a community (implementation), technical groups (research, analysis), or other parties like the private sector (cost-benefit analyses, insurance purposes, profitability studies).
- Different people may have different perceptions of risks depending on their attitudes or interests. But at the minimum, exposed populations need to have a sound and similar understanding of the dangers they, how it affects, and what they can do about them.
- The disaster risk management measures resulting from the RA must be appropriate to the local context (e.g., cultural acceptability) and feasible to implement given local capacities and resources (e.g., traditional knowledge).

## Elements of Risk Analysis

The [elements](#) of risk analysis are:

- **Hazard Analysis**
  - Geographical analysis
    - Location
    - Extent
  - Temporal analysis
    - Frequency
    - Duration
    - Probability of occurrence
  - Dimensional analysis
    - Intensity
    - Scale
- **Vulnerability Analysis**
  - Identification of elements and people potentially at risk



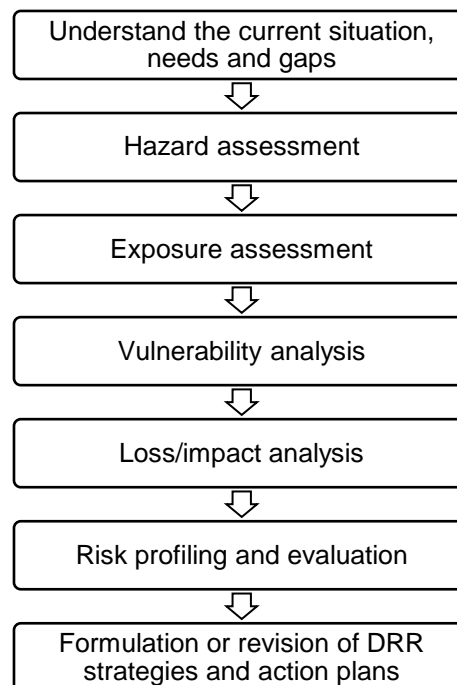


- Identification of vulnerability factors and analysis of causes
  - Physical
  - Environmental
  - Social
  - Political
  - Economic
- Assessment of possible damage/loss
- Analysis of coping capacities
- Development of strategies and measures at different levels
  - Family
  - Community
  - Village
  - Municipality/City
  - Provincial/Regional
  - National

### Comprehensive Steps in Risk Assessment

WASH managers need to understand the main steps in risk assessment to evaluate progress and revise plans as needed. UNDP outlines the general steps in [risk assessment](#):

*Figure 2: Comprehensive steps in risk analysis (UNDP, 2010)*



## Tools and Approaches

Several [participative approaches](#) and tools for risk analysis and planning are well known, like Rapid Rural Appraisal (RRA) and Participatory Rural Appraisal (PRA).

**RRA** is used to identify quickly and inexpensively rural conditions relevant to community-based DRM efforts by working with locals.

**PRA** is the action-oriented assessment of local needs and capacities (e.g., knowledge and resources). Central to PRA is the active role of at-risk and vulnerable community members.

The growing use of participative approaches and tools supports the view that traditional (top-down) planning approaches have achieved limited success despite high costs. Participatory approaches and tools promote ownership and personal initiative of disadvantaged and marginalised (target) groups. It also enhances mutual learning for all those involved.

Participatory risk analysis and planning embraces socio-cultural values, integrates local perspectives, and builds on the existing capacities of a community.

## D. Activity

There are several ways to conduct a risk analysis. Provide some examples below.

**Answer Box:**

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## E. Summary

- Risk analysis (RA) involves analysing hazards, exposure to hazards, vulnerabilities, and coping capacities. Some consider the coping capacities of populations as a component of vulnerability analysis.
- Common risk analysis products are hazard maps, risk zone maps, and risk maps.
- Participatory risk analysis and planning embraces socio-cultural values, integrates local perspectives, and builds on the existing capacities of a community. Examples of these are Rapid Rural Appraisal (RRA) and Participatory Rural Appraisal (PRA).

## 2.2 Implement disaster risk reduction and preparedness measures to build resilience and capacity to response

### A. Introduction

Implementing disaster risk reduction and preparedness measures helps build resilience and capacity for responding. It involves activities that facilitate risk awareness, mitigation of hazard impacts, proactive response, and recovery arrangements.

### B. Concept

#### Disaster Risk Reduction

UNISDR defines [disaster risk reduction](#) as the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

It also refers to developing and applying policies, strategies, and practices to minimise vulnerabilities and disaster risks throughout society through prevention, mitigation, and preparedness



Disaster risk reduction and disaster risk management seem similar, but they have differences. Disaster risk reduction is mainly concerned with strategic management activities. In contrast, disaster risk management is the tactical and operational implementation of disaster risk reduction.

## **Disaster Risk Management**

[Disaster risk management](#) is the systematic application of disaster risk reduction policies and strategies using administrative directives and organisational capacities to minimize the adverse impacts of hazards and the possibility of disaster. It aims to prevent new disaster risks from developing, lessen existing ones, or manage residual risks.

### **Preparedness**

Preparedness refers to knowledge and capacities developed by governments, organisations, communities, and individuals to anticipate, respond to, and recover from the impacts of likely, imminent or current hazard events or conditions.

### **Capacity**

[Capacity](#) combines all the strengths, attributes, and resources available within a community, organisation, or society to achieve desired outcomes. In the context of disasters, coping capacity may include physical buildings and infrastructures, institutions and organisations, human knowledge and skills, and more. These coping capacities enable people to survive adverse conditions and manage the undesirable effects of disasters.

### **Resilience**

UNISDR defines [resilience](#) as the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to, and recover from the effects of a hazard in a timely and efficient manner, including preserving and restoring its essential basic structures and functions. Resilience means “resile from” or “spring back from” a shock.

## **C. Disaster Preparedness Measures**

[Disaster preparedness](#) is a broad concept that refers to a set of measures for reducing the negative consequences of a disaster, including loss of life and property and destruction of livelihoods. Readiness measures that expedite



emergency response and early recovery and result in timely and focused assistance strengthen disaster preparedness.

Disaster preparedness also involves community-based approaches and activities that increase people's and communities' capacities to cope with the impact of a disaster on their lives.

The following are elements of a comprehensive disaster preparedness strategy:

- **Hazard, risk and vulnerability assessments**

Disaster preparedness measures start with identifying and prioritising the hazards that people face and their capacity to cope with the consequences of such hazards.

- Identify the hazards that affect a community, including their characteristics, frequency and potential severity.
- Identify the particular geographical areas exposed to those hazards.
- Identify the people, properties, and assets susceptible to a specific type of hazard and the likely impacts of that hazard.
- Assess the capacity of people, properties, and assets in exposed areas to cope or withstand the effects of a hazardous event.

- **Response mechanisms and strategies**

Response mechanisms and plans aim to facilitate appropriate emergency responses. Examples include:

- Evacuation plans and procedures (including disseminating these and testing them with the public).
- Search and rescue process and teams (including training and certification).
- Rapid assessment process and teams (including training and certification).
- SOPs for activating emergency response systems and mobilising emergency personnel and resources (e.g., emergency relief equipment and supplies)
- Stand-by arrangements at critical locations (e.g., emergency reception centres, mobile hospital facilities, temporary shelters, humanitarian logistics staging areas at airports and seaports)



- **Preparedness planning**

Disaster preparedness planning involves identifying emergency response goals and aligning those with the policies, procedures, capacities (e.g. staff), and resources of a given organisation.

The purpose of preparedness planning is to improve the timeliness and effectiveness of disaster response. The aim is not just to write a plan but to facilitate cooperation among different responders. The written plan is a tool but not the primary goal of the planning process.

- **Coordination**

Disaster response requires multi-sectoral coordination of the efforts and resources of different stakeholders—including local communities, civil society organisations, government (agencies, departments, offices, etc.), Red Cross/Red Crescent Societies, INGOs, inter-governmental organisations, academia, the private sector, and many more.

Often, the mandates and activities of these different stakeholders overlap. Coordination is required to ensure that disaster relief reaches the most people in the shortest time possible and prevent decision-making bottlenecks and unnecessary duplication of efforts.

When different stakeholders work together on disaster preparedness plans, they will have opportunities to understand each other's aims and capacities better and build trust. The communication channels they create and the awareness of each other's priorities and strengths can help improve coordination during an actual emergency response.

- **Information management**

Disaster preparedness and response rely on collecting, analysing, and acting on timely and accurate information before (e.g., early warning information), during (e.g., situations reports) and after disasters (e.g., post-disaster needs assessment).

It is essential to pre-determine what information is needed, how it may take to collect it, who will gather it, who will analyse it, and how it will be used for timely decision-making.

- **Early warning system**

The purpose of early warning systems is to forecast, detect, and issue timely alerts of potentially hazardous events. The design and function of early warning systems function need to align with disaster risk



assessments and disaster preparedness measures. Early warning information needs to be communicated in a way that allows responders to decide and act on time.

Early warning information comes from various sources: technical departments of government ministries, regional disaster management offices, local knowledge and indigenous practices, crowdsourced reports on social media, and many more.

- **Resource mobilization**

Before a disaster strikes, strategies, mechanisms, and processes for mobilising and acquiring emergency funds, supplies, and equipment should be in place. Disaster preparedness plans should clearly outline the procedures for accessing and disbursing funds, sourcing and distributing supplies and using equipment and services. Working with different partners to agree on these matters beforehand will facilitate a smoother and faster emergency response.

- **Public education, training and drills**

Public education campaigns, professional training of responders, and emergency response drills support disaster preparedness. Public education campaigns aim to raise risk awareness among at-risk communities and promote local disaster risk management efforts ownership. Investing in the professional development of responders can help improve the quality of their services. Emergency response drills raise the awareness of different stakeholders involved, allow the testing of disaster preparedness plans, and identify gaps.

## **D. Correlation Between Disaster Risk Reduction and Resilience and Capacity**

Resilience and capacity are common concepts used in disaster risk reduction. It is helpful to understand how the two concepts are related and understand the difference between them. The following is a brief explanation of resilience and capacity:

- **Resilience:** the ability of a population to thrive in the face of disaster risks.
- **Capacity:** the knowledge, skills, and resources available and accessible to a population that allows them to anticipate, cope with, resist and recover from disasters.



Disaster risk reduction programmes aim to reduce disaster risks by building capacity and increasing the resilience of at-risk populations, thus improving their security and wellbeing.

Capacity is essential to reduce disaster risk and achieve broader development goals. Capacity building contributes to allowing at-risk populations to withstand the impacts of a disaster better. Examples of capacity-building activities are educational programs, skills training, technology transfer, building infrastructures, and information campaigns.

Resilience ensures that shocks and stresses do not contribute to long-term downturns. The concept of resilience is widely debated, and there is no single universally accepted definition. But there are certain elements, when present, that can contribute to disaster resilience. These are:

- High levels of risk awareness and understanding
- Social connectedness or cohesion
- Inclusion and participation of vulnerable and marginalised communities
- High human development index scores
- Low levels of socio-economic inequality
- Presence and implementation of disaster risk reduction and management laws, funding, plans, structures, mechanisms, and arrangements
- Risk-informed development decisions and investments (e.g., not building in areas highly exposed to hazards)
- Sustainable practices and environmental-friendly programs (e.g., conserving trees and mangroves)

## **E. Activity**

Reflect on the points below and briefly describe your understanding of them:

- Disaster risk reduction
- Disaster risk management
- Resilience
- Capacity





**Answer Box:**

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**F. Summary**

- Disaster risk reduction is the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.
- Disaster risk management is the systematic application of disaster risk reduction policies and strategies using administrative directives and organisational capacities to minimize the adverse impacts of hazards and the possibility of disaster. It aims to prevent new disaster risks from developing, lessen existing ones, or manage residual risks
- Disaster preparedness is a broad concept that refers to a set of measures for reducing the negative consequences of a disaster, including loss of life and property and destruction of livelihoods
- Resilience is the ability of a population to thrive in the face of disaster risks.
- Capacity is the knowledge, skills, and resources available and accessible to a population that allows them to anticipate, cope with, resist and recover from disasters.



## 2.3 Incorporate an early recovery strategy into WASH programme design

### A. Introduction

Prompt action is required to minimise further losses and damages to lives, properties, livelihoods, and assets immediately after a disaster. Early recovery plays an essential role in facilitating the transition from emergency response to rehabilitation and reconstruction. Disaster risk management stakeholders, including those working in WASH, need to consider early recovery needs and make preparations before a disaster occurs.

### B. Concept of Early Recovery

UNDP refers to recovery as those activities that restore the capacity of national institutions and local communities to recover from a disaster, transition to 'build back better', and avoid relapses.

[Early recovery](#) is a multidimensional process driven by development principles that starts in a humanitarian setting. It seeks to build on emergency response programmes and catalyse sustainable development opportunities.

Early recovery is an approach for addressing recovery needs during the humanitarian phase of an emergency by leveraging humanitarian practices consistent with development principles. It deals with restoring essential services, livelihoods, housing, governance, security, the rule of law, the environment, and other aspects like reintegrating displaced populations.

Early recovery and humanitarian efforts occur together, but their purposes and objectives are distinct. The following are the three [aims](#) of early recovery efforts:

- Augment emergency response by building on humanitarian programmes and ensuring that aid and relief become assets or open pathways to long-term recovery
- Encourage spontaneous recovery initiatives led by affected communities and address the disaster risk and conflict dynamics
- Establish the foundations of sustainable development



## Early Recovery and WASH Programme

Disasters can disrupt water, sanitation, and hygiene services and practices. For instance, flooding can damage water supply systems and irrigation schemes that affect household assets and livelihoods. WASH programmes are a critical part of early recovery. Aspects of WASH programmes like water treatments and rainwater harvesting can be applied in this case. Hygiene promotion of WASH Programmes also helps prevent disease outbreaks that may complicate early recovery efforts and set-back progress.

## Early Recovery Principles

The [IRFC Recovery Programming Guidance \(n.d.\)](#) offers several principles to guide recovery programming. Managers of WASH programmes would benefit from understanding these principles.

*Table 4: Principles for early recovery programming*

Principles	Do	Do not
<b>Participatory</b>	<b>Do plan</b> for the affected community's ongoing engagement in early recovery and identify the potential leaders.	<b>Do not confuse</b> a simple consultative method with the actual engagement of the community in decision-making
<b>Inclusive</b>	<b>Do use</b> standards and guidelines to identify the needs of different individuals and groups.	<b>Do not restrict</b> community-led efforts, especially when they reflect the actual structure and workings of the community.
<b>Accountable</b>	<b>Do determine</b> what it means to be accountable in the workplace and build a communication and feedback strategy with the affected community.	<b>Do not assume</b> that methods used in one situation will work in another. Accountability varies depending on the situation.
<b>Do no harm</b>	<b>Do learn</b> how the projects might have both intentional and unforeseen positive and negative consequences.	<b>Do not become hesitant</b> because of difficulties – emergency and disaster situations are never ideal.
<b>Timely action</b>	During the relief phase, <b>do use</b> available information to identify recovery needs.	<b>Do not wait</b> until the disaster relief phase finishes before starting early recovery initiatives.

Source: IFRC (n.d.)



## C. Activity

Explain the importance of early recovery and how WASH Programmes can support it.

**Answer Box:**

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## D. Summary

- Early recovery seeks to build on emergency response programmes and catalyse sustainable development opportunities. It is an approach for addressing recovery needs during the humanitarian phase of an emergency by leveraging humanitarian practices consistent with development principles.
- Early recovery and humanitarian efforts occur together, but their purposes and objectives are distinct. Early recovery focuses on building on humanitarian programmes and ensuring that aid and relief become assets or open pathways to long-term recovery. Humanitarian efforts focus on saving lives and alleviating suffering.
- The fundamental principles for early recovery programming are: participatory, inclusive, accountable, “do no harm”, timely.



**4.3**

## **Element 3. Lead a WASH needs assessment as part of a multi-sector programme**

### **3.1 Select appropriate assessment type based on the situation and the agreed timeline**

#### **A. Introduction**

The first step in humanitarian response is to assess the needs of the affected population and design a prioritised plan of action based on those needs. Doing so can improve the quality and effectiveness of the emergency response.

There are three assessment types normally used in humanitarian settings: 1) Rapid Assessment, 2) Inter-Agencies Assessment, and 3) In-depth Assessment. Each assessment type has strengths and weaknesses depending on the need of the situation and the timeline for action. These assessments are essential to allow humanitarian actors to differentiate urgent lifesaving needs from medium- or long-term needs.

In the context of WASH, assessments help in:

- Determining water balance estimations
- Evaluating factors that affect the selection of water and sanitation technologies
- Assessing hygiene practices and cultural habits of affected communities
- Identifying vulnerable groups requiring WASH services
- Appraising local and national capacities to lead or support the response

Risk results from the interactions between a hazard, people's exposure to that hazard, their levels of vulnerability and capacity to cope with the impacts of a hazard.

Risk analysis provides a model for examining these connections to assess the potential impacts of hazards to society and their probability of occurring. It focuses on two core concepts: hazard and vulnerability.



## B. Types of Assessment in Humanitarian Settings

### Rapid Assessment

A rapid assessment is conducted immediately after the onset of a disaster to locally assess the disaster-affected areas and the needs of disaster victims. Without a rapid assessment, significant gaps or overlaps in aid and relief may occur, wasting precious time and resources and adding to the burden on the affected communities.

This assessment aims not to conduct a detailed survey but a broad assessment of the urgent life-saving needs of affected communities and what to prioritise. The initial rapid assessment can begin as soon as a few hours after a disaster and is usually completed within three days. But because rapid assessment prioritises data availability over its accuracy, it may be inaccurate or prone to bias (e.g., selection bias).

WASH-related information collected in rapid assessments are:

#### Water

- Water source
- Water distribution system
- Water storage
- Distance from homes/shelter to a water source
- Water testing system

#### Sanitation

- Toilet Facilities
  - Types
  - Number
  - Location (distance from shelter/housing)
  - Lights, locks
  - Maintenance
  - Menstrual hygiene materials
- Bathing Facilities
  - Lavatories, buckets, warm water, shower
  - Privacy in bathing/washing space

One important thing to consider before conducting rapid assessments for WASH Programmes is the team involved. At the minimum, the team should include a disaster risk management professional, a local staff familiar with the affected area, and relevant specialists (e.g., public health experts, educators, engineers, logisticians).



The items used in conducting rapid assessments are:

- Food
- Water
- Fuel
- Tents/sleeping bags
- Climate appropriate clothing
- Compass/GPS unit
- Maps (plastic, if available)
- List of contacts
- Camera
- Flashlight
- Backpack
- Batteries
- Chargers/adapters
- Communication devices
  - Satellite phone
  - Mobile phone
- Data entry supplies
  - iPhone/smartphone + applications
  - Paper
  - Clipboard
  - Note pads
  - Pens/pencils
  - Calculator
  - Stapler

As much as possible, rapid assessment data should be triangulated with different sources and then promptly reported to headquarters and shared with partners. When reporting, it is crucial to consider “what do disaster-affected communities need the most at the moment?”. Then create a prioritized list of recommendations for emergency response and next steps for areas needing more in-depth assessment.

### Inter-Agencies Needs Assessment

- **Multi-sector Initial Rapid Assessment (MIRA)**  
When a sudden onset disaster strikes, the Humanitarian Country Team initiates a joint needs assessment known as the Multi-Sector Initial Rapid Assessment (MIRA). The MIRA is an inter-cluster process that allows actors to develop a shared understanding of the situation.

The analytical framework of MIRA is helpful for the systematic collection, organisation, and analysis of secondary and primary data.



The MIRA informs the design of subsequent needs assessments and analyses, which are frequently more detailed and operational.

**What MIRA can provide:**

- A working model to facilitate inter-agency coordination in conducting joint rapid needs assessment based on global best practices.
- An initial shared understanding of the most pressing needs of affected areas and groups.
- A voice for the affected population.
- A basis for planning subsequent, more detailed, and operationally specific assessments.

**What MIRA cannot provide:**

- Detailed information is needed for designing localised and specific humanitarian interventions.
- A substitute for in-depth sectoral assessments.
- A statistically representative primary data for quantitative analysis of humanitarian needs.

**MIRA activities involve:**

- Secondary data analysis before and during the disaster and identification of information gaps per cluster/sector.
- Consensus on the data collection processes and tools for needs assessment considering the information gaps identified through secondary data analysis.
- Consultations with members of the community who are involved in the response.
- Dissemination of findings to the different clusters and sectors responding to the disaster.

## **In-depth Needs Assessment**

An in-depth needs assessments provide more detailed findings than the previously mentioned assessment types. It may cover multiple clusters or sectors or concentrate on a single cluster or sector. It is used when more information is needed to inform programme design.

Examples of in-depth needs assessments are representative household sampling and household-level surveys, focus group discussions and key informant interviews, and comparative and longitudinal studies over time. This type of assessment is usually conducted after a month to 45 days after the disaster, and it may take up to six (6) months.





Data from in-depth assessments are often more comprehensive and statistically representative. If done correctly, its findings can serve as a good baseline for monitoring needs, progress, responses, and gaps in aid and relief efforts.

### **Post Disaster Needs Assessment (PDNA)**

The primary goal of a PDNA is to assist governments in determining the extent of a disaster's impact on the country and, based on these findings, develop an actionable and sustainable recovery strategy for mobilising financial and technical resources. And if necessary, request additional external assistance and support to implement it, considering the affected country's institutional, economic, and technical capacities.

A PDNA usually specifies the following:

- The disaster's impact on:
  - Affected community livelihoods and properties
  - Service delivery and access to goods and services across all sectors, particularly the availability and quality of basic services
  - Governance and social processes
- Damage and loss estimated caused by the disaster to physical infrastructures, productive sectors, and the economy
- Rehabilitation and reconstruction needs, interventions needed, expected outcomes, and projected costs
- Framework for allocating and mobilising resources for recovery from local, national, and international sources.

Conducting PDNAs include collecting pre-disaster data and comparing it with post-disaster data to evaluate the magnitude and scale of the current disaster. Then, it is used to analyse the disaster impacts on priority sectors to determine overall recovery needs. It prioritises these recovery needs that inform the development of a recovery strategy.

A recovery strategy outlines the recovery objectives, the appropriate interventions, the implementation arrangements, the expected outputs, and the intended outcomes.

### **Strengths of PDNA:**

- Has widespread global acceptance, donor responsiveness, regional recognition, and national value
- Propels recovery thinking beyond the devastation and despair of disasters and develops capacities for rehabilitation and reconstruction



- Facilitates multi-stakeholder cooperation and adoption of holistic recovery efforts
- Governments with PDNAs tend to gain positive regional and international recognition for their leadership and initiative.

**Limitations of PDNA:**

- Time requirements for conducting PDNAs and disseminating government results are often unknown to stakeholders.
- As an institutional process directed by the government, accountability to affected people and how PDNA serve their interests remain unclear.
- Ensuring greater inclusion of the most vulnerable and socially marginalized groups or people with special needs remains difficult.
- There is little evidence of private sector involvement in PDNA activities.

**WASH Assessment Principles**

The following are WASH Assessment Principles from the [UNHCR WASH Manual \(2020\)](#):

- WASH assessments should be designed in a participatory and transparent manner, taking local preferences and cultural norms into account.
- WASH assessment surveys should use a well-designed survey instrument, a sampling plan, and a sample size calculation.
- WASH assessments should be carried out in a coordinated manner, following the organisation's principles and methodologies.
- WASH assessments should be carried out in collaboration with the local community and government authorities whenever possible. To ensure that females can converse with other females, all assessment teams must include female and male team members. Teams should also strive to include representatives of minority groups from disaster-affected areas.
- Wherever possible, all WASH organisations should use the same data collection tools, methodologies, indicators, and operational datasets (agreed common population names, population sizes, and administrative boundaries). A consistent approach is required to ensure that the collected data can be compared, contrasted, and compiled into a single database for shared analysis.
- WASH assessments should not overburden the population. There should be no more data collected than is necessary. Efforts should be made to ensure that assessments are well-coordinated and that affected populations are not visited multiple times by different agencies seeking the same information.



## C. Activity

Using any of the assessment methods require experience. As a manager, you must have had experience in implementing assessments. Reflect on your previous experiences and think about what to improve. List your thoughts in the space provided.

**Answer Box:**

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## D. Summary

- There are three types of assessment in humanitarian settings: rapid assessment, inter-agency needs assessment, and an in-depth needs assessment.
- Rapid assessments prioritise speed over data accuracy. It is conducted immediately after the onset of a disaster to locally assess the disaster-affected areas and the needs of disaster victims.
- Inter-agency needs assessments are the systematic collection, organisation, and analysis of secondary and primary data. It is an inter-cluster process that allows humanitarian actors to develop a shared understanding of the situation.
- An in-depth needs assessments provide more detailed findings than the previously mentioned assessment types. Data from in-depth assessments are often more comprehensive and statistically representative. Examples of in-depth needs assessments are representative household sampling and household-level surveys, focus group discussions and key informant interviews, and comparative and longitudinal studies over time.



## 3.2 Develop contextualised WASH assessment tools

### A. Introduction

There is no single assessment tool and technique that meets every information need in every situation. It helps to know about the different kinds of assessment tools and techniques and understand their functions.

### B. WASH Assessment Tools

#### Data Collection Tools and Techniques

##### Collecting Secondary Data

Secondary data refers to data collected by someone other than the primary user or source. Collecting secondary data from government documents NGO reports, among others, can be done remotely without the need to be in the field.

Staff collecting secondary data should have:

- Broad understanding of general emergency programming
- Extensive experience in their chosen sector
- Local knowledge of relevant geographic areas

It would help state the purpose for using the secondary data source. Before publishing anything, remember to clarify with the source whether the secondary data can be attributed, anonymised, or only used for analysis.

There are several ways to determine the accuracy and the usefulness of secondary data:

- Data source: Is the source credible?
- Methods: Were the methods used in collecting and analysing the data ethical and reliable?
- The data was collected and analysed: How relevant is it to the current situation?
- Alignment: Is the data consistent with those presented by other sources?
- Reason: What is the reason for collecting and analysing the data?

The table below (Table 3) presents several sources for obtaining secondary data. It is adapted from [ACAPS, 2014](#).



*Table 5: Sources for Obtaining Secondary Data*

Source	Examples
<b>National Institutions</b>	Government ministries, universities and research institutions, local authorities
<b>United Nations Agencies, International and National NGOs</b>	Situation reports, assessment reports, cluster meeting minutes, funding appeals, humanitarian profiles, epidemiological profiles, disaster summary sheets
<b>International and Local Media</b>	Television reports, newspaper and magazine articles
<b>Databases and Datasets</b>	EM-DAT, PreventionWeb, ALNAP Evaluative Reports Database, Common Operational Datasets
<b>Geospatial Data and Satellite Imagery</b>	UNOSAT, Google Earth
<b>Websites</b>	ReliefWeb, Alertnet, Shelter Centre Library, DevInfo, UN country portals
<b>Social Media</b>	Facebook, Twitter
<b>Large-scale Surveys</b>	Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), censuses

Source: ACAPS, 2014.

## Collecting Primary Data

In the context of disasters, collecting primary data is to gather the information that secondary data could not provide. It is also used to get more details about specific concerns of target beneficiaries. It involves activities like site selection, tool selection or design, field testing and a range of data collection techniques.

## Planning Data Collection

It is best to use a purposive sampling approach for the first days and weeks after the disaster. Data collectors determine where to visit, who to talk to, with a specific purpose or group(s) in mind. This approach is helpful if data collectors are interested in learning more about a particular population segment but not necessarily concerned with representativeness.



Data collected using purposive sampling can be disaggregated by age, sex, and other variables, which will allow analysts to different groups within their chosen segment of populations. However, data collected through purposive sampling does not reflect the entire affected population and should not be used to make general conclusions.

Data collectors should also be careful not to gather data entirely from the worst disaster-affected area. Doing so might create an overestimation of the impact of the disaster.

It is important to choose the best data collection methods based on needs and test the tools before going to the field. Using various methods may strengthen the assessment, but only if the assessment team is skilled at using those methods.

The following are the simplest and most common methods:

### 1. Direct Observation

There are two types of observation: structured and unstructured observations.

- **Structured observation:** where one searches for a specific behaviour, object, or event (or its absence) – for example, whether people wash their hands with soap before eating. A checklist is typically used to remind of important issues and keep track of the observations.
- **Unstructured observation:** one looks at a single situation to see what activities and circumstances may be of interest, such as how women and men move in and out of a camp.

Direction observation has advantages and disadvantages. Table 6 lists the positive and negative points of direct observation as outlined by [ACAPS, 2014](#).

*Table 6: Why Direct Observation?*

Advantages	Disadvantages
Can be used to collect different types of information in an emergency rapidly.	Provides only a snapshot, not the complete picture.
Does not require many resources to implement.	Is of limited use in quickly changing situations.



Does not necessarily require much training to carry out.	Provides only limited information about the community.
Can be used to cross-check informant responses and other assessment methods.	Requires technical expertise of observers to answer questions.
Can generate questions for further assessments.	Subjective perceptions can affect observation and distort findings.
Gives assessment teams a different perspective.	May affect observed people's behaviour and distort findings.

Source: ACAPS, 2014.

## 2. Key Informant Interviews

A key informant interview can be structured or unstructured. The former involves using a defined questionnaire on selected topics to ensure that all interviews address the same issues in the same way. The latter involves using open-ended questions to stimulate conversations about or around topics of interest.

A key informant is someone from the affected community that data collectors purposefully choose because they are considered rich information sources. They tend to have leadership roles in society (e.g., city mayor), a good understanding of the local context (e.g., school teachers), and have specialised knowledge relevant to need assessments (e.g., technical experts).

A key informant interview is less costly (time, money, and human resources) than a household survey.

## 3. Community Group Discussions

Community group discussions are like crucial informant interviews, but instead of individuals, a group of people are invited to participate. It can also be structured or unstructured and led by an experienced facilitator.

The size of the group should be diverse but small enough (ideally four to eight people) so facilitators can control the focus of the discussion and allow everyone to speak. But after a disaster, large groups of people may live in close quarters, making it difficult to be strict about group size or composition.

Group discussions can help responders understand the community's collective needs from the perspectives of its members. It can also support the co-creation of solutions and ownership of those ideas.



## Selecting Affected Sites and Vulnerable Groups

Here are vital questions to consider:

- What areas were most affected by the disaster greatest?
  - Which areas have the lowest capacity to respond and recover from the disaster?
- What groups of people need aid and relief the most?
  - Which groups are the most vulnerable?
- What areas receive the least assistance?
  - What are the gaps in the emergency response?
- Where can your organisation have the most impact?
  - What ways can your organisation build capacity of disaster-affected communities?

There are several WASH-related factors to consider after identifying and supporting vulnerable and marginalised groups. Women and girls may be living in conditions where high discrimination affects their access to WASH services. In such cases, WASH interventions need to include menstrual hygiene support. WASH interventions need to make special arrangements for the elderly and disabled people in displacement camps with many impediments to mobility or social isolation issues.

## Selecting the Assessment Tools

Different tools measure different things. There are no error-free tools, but using the right kind can help produce more relevant and accurate results. Before selecting the right assessment tool to use, there are several factors to consider.

Below are some of the factors to consider when selecting an assessment tool to use:

### 1. Appropriateness

The appropriateness of the tool depends on the information that users requires and decisions they are expecting to make based on the assessment. Some questions can help the user to determine the appropriateness of the tool:

- How effective is the tool for collecting relevant information and making specific decisions?
- Is the tool capable of gathering data to inform the activities you plan to perform?





## 2. Costs and Benefits

One of the key considerations is whether using a selected assessment tool is worth the effort. Some tools require more time and resources to use - which may not be necessary for some situations. These are questions that can help the user weigh the costs and benefits of using a tool:

- What are the potential costs of using the tools (time, money, equipment, opportunity)?
- How do these costs weigh against the potential benefits of using the tool? Will it allow a better understanding of respondents' views, provide more accurate results, and enable disaggregated data collection?

## 3. Feasibility

The usefulness of a tool largely depends on the capacity of users to design and implement it. Even if the tool is ideal to use, it won't yield useful information if users do not have sufficient resources to use it.

- The fit of the tool to the overall context (political, economic, socio-cultural, technological, legal, and environmental).

## 4. Acceptability

The usefulness of a tool also depends on how respondents feel about it and being part of an assessment. Respondents must find them acceptable, or participation will be limited. Users need to consider these questions before selecting a tool:

- Will the tool, its contents, and its conduct be acceptable to the assessment participants/respondents?
- Will both internal and external partners consider the methods of using the tool an acceptable and ethical way of gathering valid information or making informed decisions?

## 5. Experience

Experience is an essential factor in selecting a tool. Lessons from the past may shed light on the challenges of using a tool in a specific context. Users can ask themselves these questions:

- Do you (or other members of your team) have experience in using the tool?
- Will you support using a tool, given your experience of using it in similar situations?



## Decision-Making Techniques

### 1. Nominal Group Technique

This technique is a valuable tool for facilitating group decision making and consensus-building. “Nominal” means “in name only”, which indicates the original theorist’s intention to bring together a group to pool ideas around a particular issue and rank those ideas.

The advantages and disadvantages of the nominal group technique are shown below, sourced from [Watkins, Meyers, and Visser, 2012](#).

*Table 7: Advantages and Disadvantages of a nominal group technique*

Advantages	Disadvantages
The nominal group technique is more structured than the common group discussion approach.	In the nominal group approach, the synergism experienced in more open-ended group discussions may not develop as quickly.
The nominal group technique allows everyone to contribute to the discussions and decision-making, thereby minimising situations where one person dominates the group process.	The nominal group technique may feel somewhat mechanical to some participants.
The nominal group technique applies to small (3–9 people) or larger groups (for example, 10–30 people).	Although the nominal group technique can be used with a range of group sizes, it is hard to effectively implement it with large audiences unless it is planned very carefully.

Source: Watkins, Meyers, and Visser, 2012.

### 2. Tabletop Analysis

Tabletop analyses are facilitator-led discussions used in various settings to identify gaps, performance deficiencies, and communication issues in a given system. Findings from tabletop analyses inform the development of potential solutions to a performance problem.

During a tabletop analysis, the participants are presented with a problem or gap in a specific performance area. A facilitator assists a discussion-based activity where a group of participants:

- Develop a strategy for analysing the problem;
- Collect or source relevant data or information;
- Analyse the data or use the information to identify specific performance gaps; and
- Co-create potential solutions to the performance gap.



The advantages and disadvantages of tabletop analysis are shown below, sourced from [Watkins, Meyers, and Visser, 2012](#).

*Table 8: Advantages and Disadvantages of tabletop analysis.*

Advantages	Disadvantages
Tabletop analyses are not costly to run.	Tabletop analyses rely on the active engagement of participants. If facilitators do not create a participatory environment, insights gained from the activity may be limited.
Tabletop analyses happen over a short time frame (a few hours), so the time requirements for participants are minimal.	Because there is no simulation or on-the-job performance observations, results from tabletop analyses may not be an accurate test of the effectiveness of a system's performance.
Participants can explore a wide range of system challenges, issues, and gaps together.	Key individuals that run the system may not be part of the table-top exercise.

Source: Watkins, Meyers, and Visser, 2012.

### 3. Pair-wise Comparison

Pair-wise comparison techniques are used if there is a need for narrowing down options based on a set of agreed-upon criteria. It is useful for prioritising or ranking needs or potential solutions to meet those needs. When multiple options or alternatives are available, pair-wise comparisons help steer group discussions toward a conclusion.

The advantages and disadvantages of pair-wise are shown below, sourced from [Watkins, Meyers, and Visser, 2012](#).

*Table 9: Advantage and Disadvantage of Pair-wise Comparison.*

Advantages	Disadvantages
A pair-wise comparison is easily done and can be completed quickly during a group discussion to progress toward a decision or recommendation.	Pair-wise comparisons do not provide the level of detail or sophistication of multicriteria analysis.



Criteria for comparing options can remain informal, thereby letting participants make very subjective judgments.

Although criteria for making comparisons are discussed within the group, each participant may apply a different criterion (without public disclosure to other group members) when making comparisons.

Source: Watkins, Meyers, and Visser, 2012.

#### 4. Concept Mapping

Concept mapping is a technique for creating a visual representation (a picture or a map) of concepts or ideas and illustrating their relationships. The terms concept map, mind map, and idea map are synonymous. Concept mapping is used for various purposes, including data collection, consensus building, and decision-making.

The advantages and disadvantages of concept mapping are shown below, sourced from [Watkins, Meyers, and Visser, 2012](#).

*Table 10: Advantages and Disadvantages of Concept Mapping.*

Advantages	Disadvantages
Concept mapping represents ideas or views from a large group of participants or stakeholders in an easy-to-interpret format.	Without a structured approach for creating concept maps, the results can become messy and hard to read.
It generates data that can be interpreted qualitatively or quantitatively.	Concept mapping usually results in a high-level representation of a concept or idea but lacks details.
It identifies complex relationships between challenges, issues, and more in a tangible, graphic format.	Concept mapping allows continuous exploration of the relationships between the concepts or ideas that can push participants to focus on more urgent problems.

Source: Watkins, Meyers, and Visser, 2012.

#### 5. Future Wheel

The future wheel technique assists participants in analysing and exploring the mid-to-long-term effects of a trend, event, circumstance, or issue. This technique can be used to:

- Gather information about a group's perspectives of what lies ahead.
- Systematically investigate the potential effects of current events to predict alternative scenarios and their consequences
- Explore the possible impacts of various interventions.
- Examine the patterns of trends to foresee future trends.



The advantages and disadvantages of a future wheel are shown below, sourced from [Watkins, Meyers, and Visser, 2012](#).

*Table 11: Advantages and Disadvantages of Future Wheel*

Advantages	Disadvantages
The future wheel is easy to use and does not require extensive training to conduct.	One or more users may believe that effects identified through a future wheel will, in fact, actually happen when they are still “hypotheses” or “best guesses.”
It promotes systematic thinking about complex relationships between causes and consequences.	Because future wheels are laid out in a sequence around a circle, users may conclude that certain events or situations have causal relationships, even if they are only correlated.
The future wheel can be used in the needs assessment and strategic planning process.	Future wheels do not guide the timelines associated with causes and consequences identified in the future wheel. Users may be confused about what to prioritise.

Source: Watkins, Meyers, and Visser, 2012.

## C. Activity

With speeds of up to 315 km/h, Typhoon Haiyan struck the Leyte Province of the Philippines. Thousands were reportedly killed or injured. National and local governments and international and local media are already affected. You are assigned to manage a team of five (5) members to conduct a Needs Assessment for WASH. Briefly describe the main steps you will take to design and execute the needs assessment.

**Answer Box:**



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## D. Summary

- Secondary data refers to data collected by someone other than the primary user or source. Collecting secondary data from government documents NGO reports, among others, can be done remotely without the need to be in the field.
- The purpose of collecting primary data is to gather the information that secondary data could not provide. It is also used to get more details about specific concerns of target beneficiaries. It involves activities like site selection, tool selection or design, field testing and a range of data collection techniques.
- Primary data collection includes direct observation, key informant interviews, and community group discussions.
- Factors to consider when selecting a tool: Appropriateness, costs and benefits, feasibility, acceptability, and experience.
- Decision-making Techniques include nominal group technique, tabletop analysis, pair-wise comparison, concept mapping, and future wheel.



### 3.3 Design needs assessment work plan

#### A. Introduction

Designing a needs assessment work plan matching objectives to the sequence of activities and people responsible for carrying them out - as outlined by the scope, schedule, and quality required. It is not a straightforward process. Revisions are needed as situations change. This section outlines the factors to consider when creating comprehensive yet flexible work plans.

#### B. Designing Work Plan

There are three (3) main elements that each needs assessment work plan should define:

1. **Where:** the areas or locations where impact is greatest or most likely to be the greatest.
2. **Who:** the groups or populations who are in most need of assistance.
3. **What:** the areas of assistance or sectors that require immediate attention and ongoing support.

There are other factors to consider when designing a needs assessment work plan. Some are shown in the table below, sourced from [ACAPS, 2014](#):

*Table 12: Designing Needs Assessment Work Plan*

What Can Be Done?	Description
Engage Stakeholders	Stakeholders need to be involved, particularly decision-makers who use the assessment findings and the affected communities. Stakeholders should understand what the assessment intends to achieve and produce, their role and responsibilities during the process, and how the assessment findings can help them make decisions.
Support Specific Decisions	Assessments should support stakeholders in making specific decisions. It is about providing the correct information to the right people at the right time: What decisions are to be made? Who will be making those decisions? When will they be making those decisions?



Be Realistic	Conduct assessments based on the amount and types of resources available. The assessment should meet the identified decision-making needs. Still, the costs of gathering data should not outweigh the benefits of having it. Remember that when being too ambitious, costly, and less timely, there is a greater chance that the assessment will fail.
Review Secondary Data	A secondary data review reveals what information is already available.
Collect Primary Data (if needed)	Suppose there are significant information gaps after reviewing secondary data. In that case, there is a need to collect primary data in the field.
Keep the Process Going	Needs assessment is not a one-time event. It evolves as the situation changes weeks and months after a disaster. As the response unfolds and decision-makers require information on new issues. Therefore, the focus of a needs assessment will shift.
Source: ACAPS, 2014	

### When to Conduct a Needs Assessment?

While needs assessments serve to inform decisions, they can also be used proactively to identify opportunities to improve performance (e.g., preparedness), reactively to respond to the consequences of less-than-desirable outcomes (e.g., response), or continuously as an integrated component of an ongoing improvement program (e.g., recovery).

### How to Determine the Scope of the Needs Assessment?

The World Bank's [Guide](#) to Assessing Needs suggested that there are three levels to consider when deciding the scope:

#### 1. Strategic

Involves goals, objectives, and strategic policies defining the relationship between organisations and the society they serve.

- Needs assessments guide strategic decisions that affect different stakeholders.
- These decisions may be based on the needs of society and the intended beneficiaries. They may also support the interests of donors (e.g., foreign government aid offices), direct clients (e.g., government agencies), and indirect clients (e.g., community schools served by the ministry).





## 2. Tactical

Includes the policies and procedures to support strategic decisions and guide operational decisions, thereby defining the goals and objectives of an organisation.

- When an organisation wants to determine what programs and projects to develop for aid effectiveness, needs assessments can provide a valuable guide for tactical decisions.
- At the tactical level, the focus of needs assessment is to help improve the performance of an organisation. For instance, how well they respond to the needs of affected populations, their clients, and donors.

## 3. Operational

Involve short- and long-term decisions that direct projects or programs and activities required to produce results.

- Needs assessment is also helpful for making operational decisions. These decisions aim to achieve individual and team results within the organisation. They should be made alongside tactical and strategic decisions.
- They can be short-term (for example, deciding on the expected outcomes of a staff meeting) or long-term (setting project management objectives and milestones).

The table below provides more information about the three scopes of needs assessment provided, sourced from [Watkins, Meyers, and Visser, 2012](#):

*Table 13: Three Scopes for Needs Assessment: An Example*

Needs Assessment	Results Focus	Example
<b>Strategic</b>	Results contribute to the society and communities served by the organisation and its partners.	Priority needs include reducing the incidence of waterborne diseases and increasing farmland production.
<b>Tactical</b>	Results delivered by the organisation to its clients	Priority needs for the organisation include increasing the effectiveness of health and agriculture projects.



**Operational**

Results produced by individuals and teams within the organisation.

The priority needs include (a) increasing the number of completed projects and (b) increasing the number of current projects completed on time.

Source: Watkins, Meyers, and Visser, 2012.

## How to Begin a Needs Assessment?

Before beginning a needs assessment, the user must determine what decisions the assessment is meant to inform first. A needs assessment:

- Focus on results first. Solutions come after.
- Define needs as gaps in results.
- Align to strategic, tactical, and operational goals.
- Systematically analyse needs to inform decisions.
- Consider a broad array of activities.
- Compare activities against performance criteria.
- Provide information that justifies the decision before it is made.

Always clarify what decisions need to be made and the expectations before planning and conducting assessments.

## Who Should Be Involved in Needs Assessment?

Putting together a team (or a committee) to carry out the assessment is critical to the success of the performance improvement efforts. Having partners representing various backgrounds and perspectives in the needs assessment will also help improve the quality of the assessment and encourage buy-in to the recommendations that follow.

*The table below is a useful resource when thinking about who should be involved in needs assessment, sourced from [Watkins, Meyers, and Visser \(2012\)](#):*

**Table 14:** Sample Partners in a Needs Assessment for Regional Planning

	Strategic Needs Assessment	Tactical Needs Assessment	Operational Needs Assessment	Combined Needs Assessment
<b>Information sources</b>				
Clients	***	**	*	***
Customers	***	**	*	***



Community members	***	**	*	***
Senior managers	***	***	*	***
Functional heads or managers	**	***	***	***
Performers	*	**	***	***
Supervisors	*	**	***	***
Suppliers	**	**	***	**
Volunteers	**	**	***	**
Ministry officials	***	**	*	***
Elected officials	***	**	*	***
NGOs	***	**	*	***
Local community groups	***	**	*	***
<b>Needs Assessment Team</b>				
Executive sponsor	***	***	**	***
Project manager	***	***	***	***
Administrative staff	**	*	*	**
Data collection staff	*	**	**	**
Communications staff	***	**	*	***

\* = Valued partners who, if available, can improve the quality of your assessment.

\*\* = Important partners who contribute to a successful assessment, although not essential.

\*\*\* = Critical partners whose participation is essential for success.

Source: Watkins, Meyers, and Visser, 2012.



### How Long Will a Needs Assessment Take?

The time it takes to complete a practical needs assessment is determined by various factors like:

- The user's previous experience with needs assessments.
- The availability of information within the user's organisation.
- The scope of the assessment.

Some needs assessments can be completed in as little as a week, while others may last several months. The questions below can be helpful to determine the time required for the needs assessment:

- Have you ever conducted a needs assessment before? Has your organisation conducted a needs assessment previously?
- Do you have staff and resources in your organisation that know how to collect, synthesise, analyse, and share information for needs assessments?
- Is there a strategic plan in place at your company that links strategic, tactical, and operational performance goals?
- Is data on current performance routinely collected in your organisation to inform decisions?
- Is your needs assessment strategic, tactical, operational, or a combination of the three?
- Are there any project deadlines or external events that require the assessment to complete on a specific date?

### How to Manage a Needs Assessment:

Below is a list of some points to remember when managing a needs assessment:

- Involve both internal and external partners as early as possible. It is challenging to conduct a needs assessment without engaging all relevant partners.
- Find a top-level sponsor. Managing a needs assessment requires a combination of responsibility (for the results of assessments), authority (to make decisions and allocate resources), and accountability (for the conduct of assessments).
- Establish measurable objectives and deliverables and clearly define the scope and timelines.
- Successful needs assessments do not occur by chance. They are completed by an individual or a team with effective leadership and management skills.
- There is no such thing as a "perfect" needs assessment. Teams need to find an appropriate balance between time, budget, and the quality of results expected.



- Communicate frequently and early. Rather than allowing partners to become passive observers, keep them engaged and active throughout the needs assessment.
- Focus on achieving results.

### **Things to Consider when Designing WASH Needs Assessment Work Plan**

- On water sources: Potential water sources include access to an existing piped water network, the location of the water source (GPS coordinates), the volume of available water, the quality of the water, the cost of development, existing users, and considerations for protection.
- On sanitation: existing sewer networks, ground conditions including soil type (rocky, sandy, clay), soil permeability (percolation test), specialized construction and desludging equipment needed, and nearest sludge disposal site.
- On solid waste management: access to existing waste collection services, location of nearest landfill or transfer station, or identification of suitable sites for new waste disposal pits
- On the environment: flood risk and vector breeding potential

On security: understanding the links of natural resources to conflict and instability

### **C. Activity**

Identify at least three (3) things you should do when designing an assessment plan. Briefly describe why you identified them.

**Answer Box:**



## D. Summary

- There are three (3) main elements that each needs assessment work plan should define. The areas or locations where impact is greatest or most likely to be the greatest. The groups or populations who are in most need of assistance. The areas of assistance or sectors that require immediate attention and ongoing support.
- While needs assessments serve to inform decisions, they can also be used proactively to identify opportunities to improve performance (e.g., preparedness), reactively to respond to the consequences of less-than-desirable outcomes (e.g., response), or continuously as an integrated component of an ongoing improvement program (e.g., recovery).
- The scope of the needs assessment depends on the level of activity it is intended to support: strategic, tactical, or operational.
- Putting together a team (or a committee) to carry out the assessment is critical to the success of the performance improvement efforts. Having partners representing various backgrounds and perspectives in the needs assessment will also help improve the quality of the assessment and encourage buy-in to the recommendations that follow.
- The time it will take to conduct a needs assessment depends on the user's previous experience with needs assessments, the availability of information within the user's organisation, and the scope of the assessment.
- When designing a WASH needs assessment plan, consider water sources, sanitation, solid waste management, environment, and security.

## 3.4 Develop contextualised WASH assessment tools

### A. Introduction

After collecting the data, it needs to be analysed to help identify the gaps and determine the priority of needs. The findings from analyses can assist the organisation in delivering timely and appropriate services to the affected sites.

### B. Prioritize Needs

Defining the program goals or project objectives is also necessary before collecting data from target groups. It is necessary to identify who are the target groups before prioritising needs. Usually, these groups are most vulnerable to disaster impacts or have the greatest difficulty coping with its effects. Based on need, list concerns and then rank in order of importance (using decision-making techniques).



## C. Summarize Findings and Checking

After prioritising needs, the next step is to summarise, document, and communicate findings, including describing the main gaps or causes to address. Share these findings within your team, organisation, and partners so they can also check them for errors and inconsistencies.

## D. Activity

List the possible needs of the following groups and think of needs (related to WASH context) that you will prioritise

- Women and girls
- People with disabilities
- Elderly population

**Answer Box:**

## E. Summary

- After collecting the data, it needs to be analysed to help identify the gaps and determine the priority of needs.
- Based on need, list concerns and then rank in order of importance (using decision-making techniques).
- After prioritising needs, the next step is to summarise, document, and communicate findings, including describing the main gaps or causes to address.
- Share these findings within your team, organisation, and partners so they can also check them for errors and inconsistencies.



## 3.5 Develop recommendations for WASH programmes and produce a need assessment report

### A. Introduction

After the data is collected and analysed and the needs or gaps are identified and prioritised, a solution must be developed to address the needs and gaps. These solutions come in the form of recommendations meant to help improve the activities and interventions of a particular organisation. The final product is a needs assessment report that will be circulated to both internal and external partners.

### B. Decision Making

The decision-making techniques outlined in Element 3.2, Sub-element 3.2.2, provide information on identifying and developing the recommendations. Recommendations list the priority needs, the proposed responses (short- to mid-term), information gaps of the assessment, and advice to future assessments.

### C. Producing a Need Assessment Report

Needs assessment reports tend to have similar components. The table below lists some of those relevant to WASH, sourced from [ACAPS \(2014\)](#) and [RRD \(2019\)](#).

*Table 15: Structure of WASH Needs Assessment Report in Humanitarian Settings*

Section	Contents
<b>Author Details</b>	Name, date, organisation, office
<b>Executive Summary</b>	A brief and readable summary of the entire report
<b>Assessment Plan</b>	Goal and objectives Terms of reference Assessment team composition





<b>Methodology</b>	<p>Methods and approaches</p> <p>Timeframe</p> <p>Locations visited</p> <p>Reason for the chosen approach</p> <p>Assumptions made for the assessment</p> <p>Limitations of the assessment</p> <p>Information gaps and requirements for further assessment</p>
<b>Background</b>	<p>Context (social, economic, cultural, political)</p> <p>Brief description of disaster and disaster area</p> <p>Impact summary (physical, environmental, social, political, economic)</p>
<b>General Humanitarian Situation</b>	<p>Drivers of the crisis and underlying factors</p> <p>Scope of the crisis and humanitarian profile</p> <p>State of populations living in affected areas</p> <p>National capacities and response</p> <p>International capacities and response</p> <p>Humanitarian access</p> <p>Coverage and gaps</p> <p>Key priorities</p> <p>* Driver: a factor that causes a particular phenomenon to happen or develop</p>
<b>Overview</b>	<p>Key issues such as displacement patterns, epidemiological information, and demographics</p>
<b>Findings:</b>	<p>An overview of the gathered data and analysis:</p>
<b>Water</b>	<p>Data and analysis focusing on water</p>
<b>Sanitation and Hygiene</b>	<p>Data and analysis focusing on sanitation and hygiene</p>
<b>Technical Sectors</b>	<p>WASH, Education, Shelter, etc.</p>
<b>Cross-cutting Issues</b>	<p>Gender, Protection, Environment, etc.</p>
<b>Response by Other Actors / Stakeholder Analysis</b>	<p>Community, government (national and local), NGOs (national and international), UN agencies, donors, military, and other actors</p>
<b>Partnerships</b>	<p>Current and proposed partnerships</p> <p>Critical issues</p>
<b>Operating Conditions</b>	<p>Security (including civil-military relations)</p> <p>Logistics (including infrastructure damage)</p> <p>Infrastructure conditions (including working spaces)</p> <p>Government regulations and requirements for operations</p> <p>Market conditions (including local availability of relief items)</p>



<b>Key Findings</b>	A summary of the analysis
<b>Scenarios</b>	Possible course of events that could occur based on informed assumptions, which may form the basis for humanitarian contingency planning
<b>Recommendations</b>	Priority needs and proposed responses (short-term and mid-term) Information gaps and future assessment needs
<b>Annexes</b>	A compilation of photos related to WASH, such as water storage tanks, water trucks, sewage discharge, etc. Any additional information needed to understand the assessment

Source: ACAPS, 2014; RRD, 2019.

## D. Activity

Look at the “cross-cutting issues” section in the table above. Can you think of other cross-issues closely related to WASH? List them in the box below.

**Answer Box:**



## E. Summary

- After the data is collected and analysed and the needs or gaps are identified and prioritised, a solution must be developed to address the needs and gaps.
- These solutions come in the form of recommendations meant to help improve the activities and interventions of a particular organisation.
- The final product is a needs assessment report that will be circulated to both internal and external partners.





# Self-assessment Checklist



ONE ASEAN  
ONE RESPONSE

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## Self-assessment Checklist

Please use the checklist below to help you determine whether you are prepared to be assessed in this unit of competency. The boxes without tick mark indicate that there may be some areas you need to work on to become ready for assessment.

### Instructions

Please tick (✓)  
the box if your  
answer is yes

### Questions

☐

Have I read the Learner Guide and understood its contents?

☐

Have I attended, participated in, and completed all training sessions and activities?

☐

Have I reviewed the learning resources to reinforce what I've learned in training?

☐

Am I able to demonstrate my understanding of each element and performance criteria of this unit of competency by writing a summary in my own words?

☐

Am I able to communicate how my experience, knowledge, skills-sets, and attitudes make me qualified and competent enough to perform the job related to this unit of competency?





# Oral Interview and Written Test Guide



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## Oral interview and written test guide

This section guides candidates on how to communicate, demonstrate, or present evidence, responses, and their work in a professional manner. There are three primary ways the candidates will be assessed: through observation, oral interview, and written test. The assessor will determine the final assessment methods and tools depending on several factors like the local context, professional needs, and the like.

### On observations

Assessors will observe the candidate over a period of time to collect evidence of their capability to meet the required standards and performance criteria. Assessors may attend selected learning sessions, if any, to witness how candidates complete their activities and participate in exercises. In doing so, assessors can get a sense of the candidate's key strengths and areas for improvement concerning the unit of competency. It will benefit candidates to ensure their work is always complete and presentable.

### On oral interview

Assessors will conduct oral interviews to confirm and evaluate the candidate's experience, knowledge, skills, and attitudes regarding the unit of competency under assessment.

Please review the Unit Readings and complete the Self-assessment Checklist in this document. It may include verification questions about what you learned from the training content and material. It may also include competency questions about your knowledge and skills. Assessors may ask you what knowledge or skill you will use or apply to address a specific occupational issue or problem. Candidates need to think about how they will carry out their critical job functions in a defined work setting.

Finally, the interview may also include behavioural questions that focus on attitudes. Assessors may ask for examples of what you will do when a particular situation happens or when circumstances change. Candidates will need to support their answers with reflections on their own or other's experiences and the lessons learned from those.

### On written tests

Assessors will also present a written test to candidates to confirm whether candidates learned and understood the training content and material concerning the unit of competency under assessment.



Accuracy, brevity, and clarity are the ABCs of good writing. The first thing candidates are suggested to do is answer the questions as accurately as possible. It helps structure your response and sharpen your main points in an outline before writing them down. Candidates are advised to use short and simple sentences and paragraphs. The key messages and transitions between your sentences and paragraphs must be clear. Your answers need to be easy to read and understand. It includes removing and leaving out irrelevant material. Candidates are also expected to write coherently and logically so that readers can follow their thought.

Proofread and correct errors in your work before submitting it. How you format your work also matters. If you are using a computer, please check whether your indentions, margins, spacing, listings (bullets, numerical sequencing), and page numbers are in order.







# Recommended Readings



**ASCEND**



## Recommended Readings

ACAPS. (2014). *Humanitarian Needs Assessment: The Good Enough Guide, The Assessment Capacities Project (ACAPS)*. Rugby, UK: Emergency Capacity Building Project (ECB) and Practical Action Publishing. Accessible [here](#)

Arii, M. (2013). Rapid assessment in disasters. Japan Medical Association Journal, 56(1), 19–24. Accessible [here](#).

Coppola D. P. (2015). *Hazards. Introduction to International Disaster Management*, 40–149. Accessible [here](#)

CWGER. (2008). *Guidance Note on Early Recovery*. Accessible [here](#)

ECHO, GFDRR, UN, World Bank. (2014). *PDNA Guidelines Volume B: Water & Sanitation*. Accessible [here](#)

EU, GFDRR, UN. (2013). *Post-Disaster Needs Assessments: Volume A. Joint Declaration on Post-Crisis Assessments and Recovery Planning*. Accessible [here](#).

Garfield, R. et al. (2010). *Common Needs Assessment and Humanitarian Action*. Network Paper. Westminster, UK: Overseas Development Institute. Accessible [here](#)

The Sphere Project. (2018). *The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response*. Accessible [here](#).

Watkins, R., Meyers, M. W., & Visser, Y. L. (2012). *A Guide to Assessing Needs*. The World Bank. Accessible [here](#)

WatSan Mission Assistant. (2018). *IFRC - Gender Training Package, Methodologies for information gathering*. Accessible [here](#).





## Learning Resources

Centers for Disease Control and Prevention. (2020). *Global Water, Sanitation & Hygiene (WASH) Data Collection and Communication*. Accessible [here](#).

Erlmann, T. (n.d.). Data-based decision-making processes for WASH. Sustainable Sanitation and Water Management Toolbox [www.sswm.info](http://www.sswm.info). Accessible [here](#).

IFRC. (n.d.). *Disaster Preparedness*. Accessible [here](#).

UNDRR. (n.d.). *Capacity*. Accessible [here](#).

UNDRR. (n.d.). *Resilience*. Accessible [here](#).

WatSan Mission Assistant. (2018). *IFRC - Hints of Gathering Information*. Accessible [here](#).





# Training Evaluation Sheet



**ASCEND**



## Training evaluation sheet

### Name of Training

### Competency unit title and number

**ADM.TEC.021.1** Conduct In-Depth Analysis on WASH in Humanitarian Settings

### Location of training

### Date of training

### Instructions

Please tick (✓) your level of agreement with the statements below

**Strongly Agree**

**Agree**

**Neither Agree or Disagree**

**Disagree**

**Strongly Disagree**

### Training content and facility

The training objectives were clearly defined and met.

☐
☐
☐
☐
☐

The training content was organized and easy to follow.

☐
☐
☐
☐
☐

The training material was relevant and useful to me.

☐
☐
☐
☐
☐

The training facility is adequate and comfortable.

☐
☐
☐
☐
☐


### Training delivery and activities

The trainers/presenters were knowledgeable and well prepared.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The trainers/presenters were engaging and helpful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The length of the training was sufficient for learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The pace of the training was appropriate to the content and attendees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The activities and exercises encouraged participation and interaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### What did you like most about this training?



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**What parts of the training could be improved?**

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**Other comments and feedback:**

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**Thank you for completing this training evaluation form.  
Your response is appreciated.**





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ASEAN Standards and Certification for Experts in Disaster Management

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