

**LEARNER'S
GUIDE**



TECHNICAL COMPETENCY UNIT



**ADM.TEC
027.2**

Provide Technical Assistance on Core Public Health
Promotion and Behaviour Change Concepts



ASCEND

ASEAN Standards and Certification
for Experts in Disaster Management

ASEAN Standards and Certification for Experts in Disaster Management

PROVIDE TECHNICAL ASSISTANCE ON CORE PUBLIC HEALTH PROMOTION AND BEHAVIOUR CHANGE CONCEPTS

ADM.TEC.027.2

Learner's Guide



ONE ASEAN ONE RESPONSE

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.

The "ASEAN Standards and Certification for Experts in Disaster Management (ASCEND)" is under Priority Programme 5: Global Leadership of the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Programme 2021-2025 that envisions ASEAN as a global leader in disaster management.

The publication of this document is part of the "ASEAN Standards and Certification for Experts in Disaster Management (ASCEND) Toolboxes Development for Five (5) Professions" project.

General information on ASEAN appears online at the ASEAN Website: www.asean.org
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For inquiries, please contact:

The AHA Centre

Graha BNPB, 13th floor Jl. Raya Pramuka Kav. 38 East Jakarta 13120 Indonesia
 Phone: +62 21 21012278 Fax: +62 21 21012287 Email: info@ahacentre.org

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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 ensure disasters across the region are met with competent disaster management professionals in order to reduce the loss of life, respond effectively, recover more quickly, and decrease risks throughout the ASEAN region wherever possible. Note: In cases of extraordinary,



diminished capacities, non-certified persons may be utilised at the discretion of the AMS in compliance with local governance/rules/laws.

- To establish a guide for certification of disaster management professionals across ASEAN Member States. The disaster management professionals will be certified in a competency-based assessment to perform tasks across all strategic components of AADMER, i.e. risk assessment and awareness, prevention and mitigation, preparedness and response, and recovery.
- To ensure disaster management professionals can work interchangeably and cooperatively both in their home country and in all AMS.

1.3

Advantages and benefits of an ASCEND certification

For ASEAN

The ASCEND certification enables ASEAN Member States to efficiently manage emergencies and disasters by fostering a regional network of competent professionals. It equips ASEAN countries to recognise the expertise of incoming assisting teams if needed. Simultaneously, it streamlines resource mobilisation for assisting countries while upholding the ASEAN Standards.

For the AHA Centre

With ASEAN's rapid development and vulnerability to natural hazards, it requires a skilled workforce of disaster management professionals. The ASCEND certification can bridge the existing knowledge and skills gaps, promoting stronger cooperation and interoperability among disaster managers in the region.

For disaster management professionals

The ASCEND certification serves as a valuable credential for disaster management professionals, providing evidence of their expertise and qualifications. It also helps organisations to determine the capabilities of certificate holders in performing critical job functions of specific occupations in the disaster management sector.



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.

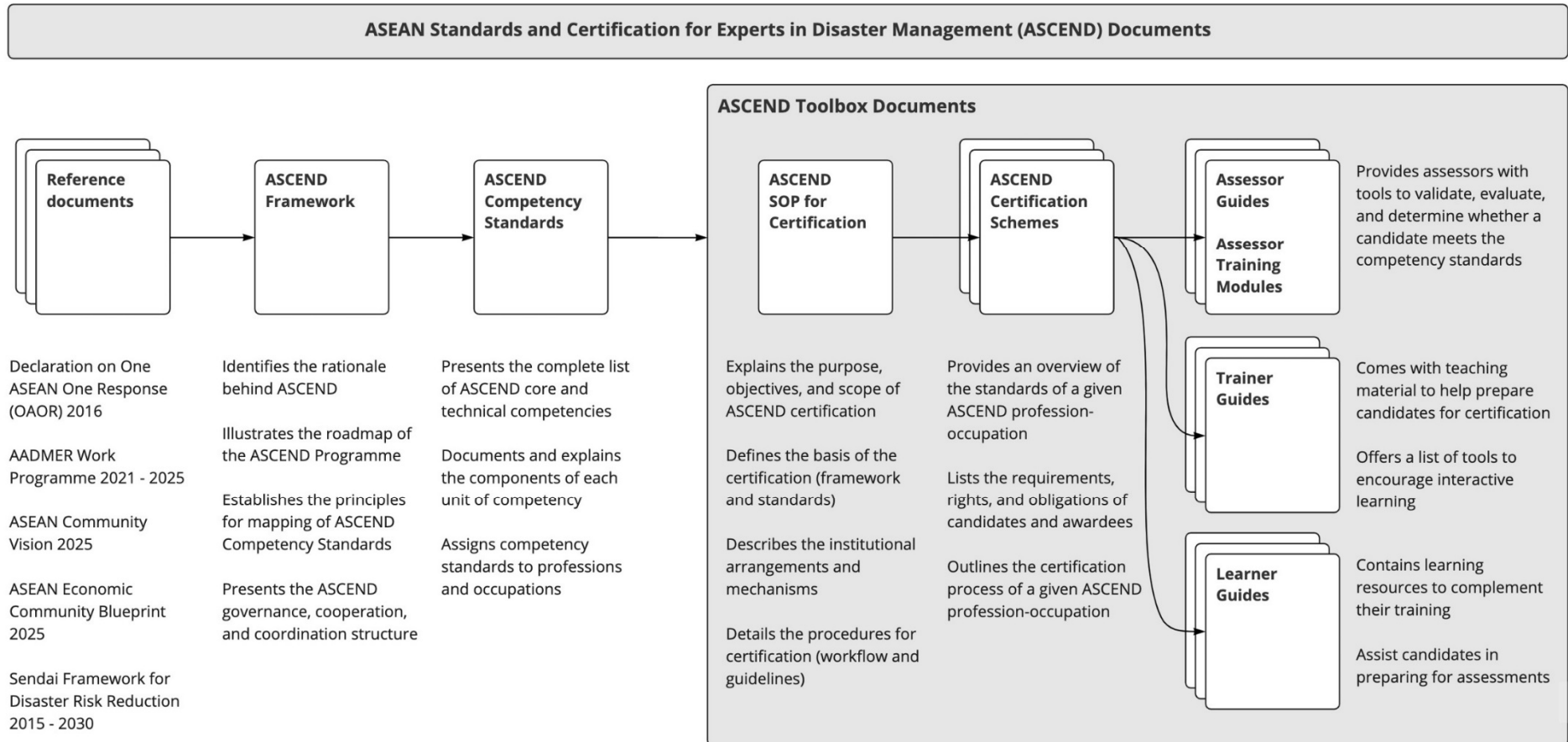
Another requirement is the development of an ASCEND Toolbox for five professions. These professions are Rapid Assessment, Humanitarian Logistics, Information Management, Water, Sanitation and Hygiene (WASH), and Shelter Management. The ASCEND Toolbox consists of an SOP, Certification Schemes, Assessor 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 Guide

Introduction for Candidates



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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
Experience	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.
Knowledge	Refers to what the candidate needs to know to make informed decisions on how to perform the work effectively.
Skills	Refers to the ability of the candidate to apply knowledge to complete occupational tasks and produce work outcomes or results at the standard required.
Attitudes	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



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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 identifies 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. 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
Unit title	Describes the critical work function to be performed in an occupation
Unit number	<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"> ▪ ADM.COR.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. ▪ ADM.TEC.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.
Unit description	Provides information about the critical work function covered by the unit.
Elements	Presents the occupational tasks required to perform the critical work function in the unit.
Performance criteria	Lists the expected outcomes or results from the occupational tasks to perform and the standard required.



3.3

Unit descriptor

Unit title : **Provide Technical Assistance on Core Public Health Promotion and Behaviour Change Concepts**

Unit number : ADM.TEC.027.2

Unit description : This unit deals with the skills and knowledge required to implement a project related to public health promotion during emergencies, including promoting good hygiene practices in the affected community.

Element 1.

Provide technical guidance on hygiene promotion

Performance Criteria

- 1.1 Identify and analyse standards related to hygiene promotion
- 1.2 Conduct hygiene promotion needs assessment and prioritisation in emergency situation
- 1.3 Identify and analyse different elements and relevance of measures for hygiene promotion in emergencies
- 1.4 Identify key aspects of developing a sustainable hygiene promotion campaign and awareness
- 1.5 Identify key issues and good practices on hygiene promotion measures in different types of emergencies
- 1.6 Identify key issues and good practices in establishing WASH committee in emergencies
- 1.7 Identify key issues and good practices in menstrual hygiene management
- 1.8 Identify key issues and good practices related to behaviour change communication in emergency including misinformation, disinformation, and hoax

Element 2.

Provide technical guidance on vector control

Performance Criteria

- 2.1 Identify and analyse standards related to vector control on health risks in an emergency
- 2.2 Conduct needs assessment and prioritisation on vector control in emergency situation
- 2.3 Identify and analyse different elements and relevance of measures for vector control in emergencies



- 2.4 Identify key aspects on operation and maintenance of vector control system and facilities for continued health benefits**
- 2.5 Identify key issues and good practices on vector control measures in different types of emergencies**



3.4

Glossary of Terms and List of Abbreviations

Terms and abbreviations	Descriptions
AADMER	ASEAN Agreement on Disaster Management and Emergency Response
ACDM	ASEAN Committee on Disaster Management
AGP	ASEAN Guiding Principles
AHA Centre	ASEAN Coordinating Centre for Humanitarian Assistance on disaster management
AMS	ASEAN Member States
AQRF	ASEAN Qualifications Reference Framework
ASCEND	ASEAN Standards and Certification for Experts in disaster management
ASEAN	Association of Southeast Asian Nations
BAWASA	Barangay Waterworks and Sanitation Association
CBA	Competency-Based Assessment
CWA	Consolidated WASH Account
FGD	Focus Group Discussion
IDP	Internally Displaced Persons
IFRC	International Federation of Red Cross and Red Crescent Societies
IVG	Integrated Vector Management



KNFA	Korean National Fire Agency
MHM	Menstrual Hygiene Management
MRA	Mutual Recognition Arrangement
OAOR	One ASEAN One Response
OXFAM	Oxford Committee for Famine Relief
PHAST	Participatory Hygiene and Sanitation Transformation
PRA	Participatory Rural Appraisal
RRA	Rapid Rural Appraisal
SBCC	Social and Behaviour Change Communications
SOP	Standards Operating Procedures
SMART	Specific, Measurable, Achievable, Realistic, and Timely
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
WASH	Water, Sanitation and Hygiene
WASH KAP	WASH Knowledge, Attitude, and Practices
WHO	World Health Organisation
WHO-SEARO	WHO South-East Asia Regional Office





Unit Readings and Activities



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**4.1**

Element 1. Provide technical guidance on hygiene promotion

1.1 Identify and analyse standards related to hygiene promotion

A. Introduction

Hygiene promotion is a WASH response that seeks to prevent disease outbreaks related to inadequate sanitation and unhealthy behaviours. The impact of hygiene promotion activities is hard to measure because they are often non-structural and have more to do with human attitudes and practices. There are, however, several standards that can help indicate the effectiveness of hygiene promotion.

B. Hygiene promotion

Ineffective hygiene promotion can lead to more suffering, even loss of life, further complicating response and early recovery. The three key components of hygiene promotion efforts are mutual information and knowledge sharing, mobilising communities, and providing essential materials and facilities. Below is the list of general steps conducted when carrying out hygiene promotion (Curtis, 1999):

- Target specific audiences: Children, mothers, leaders, or other groups.
- Work on a particular intervention: For instance, to control diarrhoea cases, the priority of hygiene behaviour should be handwashing with soap after contact with faeces
- Craft positive messages: People learn best when they are encouraged and entertained. Avoid frightening your audiences.
- Find out what motivates behavioural change: The motive may not be directly related to health. It can be for socio-economic, political, religious, and many other reasons.
- Decide on a cost-effective mix: Face-to-face communication can be effective but costs a lot of money. Meanwhile, mass media can be cheaper, but their messages can be soon forgotten. So, it is important to reach a trade-off between effectiveness and cost.
- Use appropriate communication channels: This depends on the audience. Traditional and existing communication channels tend to be



effective. But WASH programme staff need to analyse its reach (e.g., whether it reaches marginalised and vulnerable groups).

- Apply hygiene promotion indicators to evaluate the impact and make improvements

C. Hygiene promotion standards

According to Sphere, there are two minimum standards in hygiene promotion for sustaining the dignity and lives of those affected by the disaster.

Hygiene promotion standard 1: Use of facilities and hygiene behaviour

All groups of the affected population should be aware of the need to adopt good hygiene behaviours and have adequate information on sanitation facilities. Critical indicators for this standard involve water supply, excreta disposal, vector control, solid waste management, drainage, and funerals.

Table 3: Hygiene promotion standards

Water Supply	Excreta Disposal	Drainage
People use clean and potable water	People use toilets properly	Wastewater and local storm water are adequately drained, especially near the shelter area
Appropriate public hygiene facilities with water supply	Faeces are disposed of immediately and hygienically	Availability of tools for drainage work
At least 15 L/person/day available for water use	People maintain the cleanliness of toilets	Schistosomiasis risk management is followed
Water containers are provided with covers	Increase awareness of how to handle children's faeces	
Faecal contamination less than 50 faecal coliforms/day	Implementation of family latrine programme	
	Washing hand regularly after defecation and before cooking	

Source: [IFRC,2000](#)



Waste should be placed in containers and disposed of daily or buried in a pit for solid waste management. For funerals, the funeral should be carried out according to the culture but take extra measures not to increase risks to public health. Infectious waste (including medical waste) should be appropriately handled and segregated far from community areas to enhance vector control.

Hygiene promotion standard 2: Program implementation

Key indicators:

- Identifying public health key hygiene risks in the objectives and the assessment for hygiene promotion purpose
- Design and implement a mechanism for taking input from all users and programmes related to WASH
- Resources or facilities should be accessible for all groups in the population
- Hygiene promotion activities should be addressed priority groups and the importance of public health
- The intended audience should understand and willing to accept the hygiene and behaviour messages
- The users should take responsibility for the maintenance and management of the facilities

The main hygiene promotion-related [Sphere](#) standards focus on increasing knowledge and motivating behavioural change:

- Hygiene promotion: Awareness of people on the importance of proper hygiene for taking of one's health and public health
- Identification and access to hygiene items: Items that support hygiene and health are appropriate and available
- Menstrual hygiene management: Hygiene products that support the well-being and dignity of women and girls are encouraged and provided

Several minimum hygiene standards guide WASH responses during emergency responses. These are often reported every week or once a month for monitoring purposes.

- **Number of persons per bath:** The maximum capacity per bath/shower in a shelter is 50. Facilities should also be structurally safe, easy to maintain and provide privacy.
- **Number of persons per hygiene promoter:** At least one promoter should be available for every 500 affected people.
- **% of households with access to soap:** 70% of households should have access to soap. RAPID WASH assessment can be conducted



- **% of reproductive-age women who are satisfied with menstrual hygiene facilities:** 70% of women should be satisfied with menstrual hygiene facilities
- **Soap:** At least 450 grams should be available per person per month (250g for personal hygiene and 200g for washing purposes). An additional 250g should be available for women and girls for menstrual hygiene purposes.

D. Post-emergency standards

In post-emergency settings, minimum hygiene standards should be reported once a month for monitoring purposes or once a year for household indicators through WASH KAP (knowledge, attitude, and practices) surveys.

- **Number of persons per bath:** The maximum capacity per bath/shower in a shelter is 20 persons-ideally, one per household. Facilities should also be structurally safe, easy to maintain and provide privacy.
- **Number of persons per hygiene promoter:** At least one promoter should be available for every 1,000 affected people.
- **% of households with access to soap:** 70% of households should have access to soap. WASH KAP assessment can be conducted
- **% of reproductive-age women who are satisfied with menstrual hygiene facilities:** 70% of women should be satisfied with menstrual hygiene facilities
- **Soap:** At least 450 grams should be available per person per month (250 g for personal hygiene and 200 g for washing purposes). An additional 250g should be available for women and girls for menstrual hygiene purposes.



Examples of hygiene-related indicators in emergencies and post-emergency situations

Table 4: Hygiene-related indicators in emergencies

Objective	Output Objective	Indicator	Unit	Standard		Camp	Out of Camp
				Emergency	Post emergency		
Population whose lives in an adequate condition of hygiene and sanitation	Implemented environmental and hygiene campaign	Number of persons/baths per shelter	Of POC	<50 or =50	<20 or =20	yes	yes
		Number of persons per hygiene promoter	Of POC	<500 or =500	<1000 or =1000	yes	no
	% of house with soap availability	%	>70 or =70	>90 or =90	yes	yes	
	% of woman recipients who are stratified with material and management of menstrual hygiene	%	>70 or =70	>90 or =90	yes	yes	
	Soaps for personal hygiene	Gram per person per month	>450 or =450	>450 or =450	yes	yes	
	Soaps for menstrual hygiene	Gram per person per month	>200 or =200	>200 or =200	yes	yes	

Source: [UNHCR,2018](#)

E. Summary

- Hygiene promotion is a WASH response that seeks to prevent disease outbreaks related to inadequate sanitation and unhealthy behaviours.
- The impact of hygiene promotion activities is hard to measure because they are often non-structural and have more to do with human attitudes and practices.



- Ineffective hygiene promotion can lead to more suffering, even loss of life, further complicate response and early recovery.
- The three key components of hygiene promotion efforts are mutual sharing of information and knowledge, mobilising communities, and providing essential materials and facilities.
- There are two widely used hygiene promotion standards. The first one is related to the use of facilities and hygiene behaviour, and the second is related to program implementation.

1.2 Conduct hygiene promotion needs assessment and prioritisation in emergency situation

A. Introduction

Like all activities in emergency response, hygiene promotion activities in such contexts should be informed by a needs assessment. A consultation with health professionals can help determine priorities based on disease prevalence and hygiene practices findings. The sooner the impact of hygiene practices, the higher the chances health risks may be mitigated or prevented.

B. Hygiene promotion needs assessment

A successful emergency response begins with a good assessment. A disaster needs assessment has two purposes. First, inform the response plans and priorities. Second, identify the external capacities and resources needed to close the gap if unavailable within the organisation. A general needs assessment report will contain the following information:

- Nature of the disaster: type, impact, scale
- Condition of the affected population, including population demographics and statistics
- Local resources and capacities
- Needs of the affected populations

It is essential to consider several factors when ranking hygiene promotion needs and determining priorities, like seasonal changes, the incidence of diseases, availability of water sources, and kinds of sanitation practices.



C. Needs prioritisation

One of the ways to speed up emergency response is to know what to prioritise. Needs prioritisation facilitates quicker decision-making and coordination of activities. An emergency response consists of three stages:

- Assessing the situation
- Choose the objectives and propose alternatives
- Implement the response

After evaluating disaster impacts and evaluating the condition of the affected population, the next step is to identify risks and the WASH needs. It includes looking out for secondary hazards that may worsen the situation of those in disaster sites, determining the available resources and capacities (e.g., clean and accessible water supply), groups of the community to target and their specific needs.

Time-sensitive needs have to be addressed right away, like providing WASH facilities for emergency medical care to save lives and providing life support needs like sufficient access to drinking water. Another way to determine priorities is through scenario-building and forecasting based on needs assessment data. For instance, people living in densely packed shelters without adequate sanitation facilities may be at high risk of disease outbreaks.

However, one of the most effective ways to prioritise is to involve affected community members in identifying and deciding which needs to prioritise and the ideal ways of addressing them. Any effort to include the community must be representative. Techniques and tools like Participatory Rural Appraisal (PRA) and Rapid Rural Appraisal (RRA) provide practical guidelines ([WHO SEARO,2003](#)).

When determining priorities, ask participants to rank their WASH needs based on their needs. For instance, which do they need more water storage or washing facilities? It is essential to use diagrams or other visual tools during the discussion to gain insights into the relationships between time, space, resources, capacities that may affect the spread of diseases or time to build WASH facilities. It is also essential to discuss the challenges and constraints to programme implementation.

[A general ranking process used in hygiene promotion:](#)

Step 1: Explain the exercise

The ranking process has five steps:



- Knowing the participants
- Use a standard matrix
- List items in the matrix and rank them
- Calculate and compare the scores
- Conduct discussions on the results

Step 2: Diversify the participant group

The WASH team can establish different priorities, activities, facilities, and services needed when participants come from and represent various segments of the affected population.

Step 3: Facilitate the ranking process

The facilitator can help the group identify each need's weight and priority levels, but the decision should come from the participants. The facilitator can divide the participants into sub-groups of three people. Then, ask each sub-group to choose one interviewer, one informant, and one recorder. Finally, each sub-group presents its results to the whole group.

Table 5: Example: Ranking results

Priority Needs	Rank	Activities	Rank
Preventing Diarrhoea	4	Family latrines	3
		Communal latrines	1
		Handwashing	2
Preventing Malaria	3	Bed nets	1
		Wastewater disposals	2
Clean Environment	2	Cleaning materials	1
		Solid waste pits	2
Traditional Funeral	1	Burial ground	1
		Concrete grave markers	2
		Morgue	3
Family Facilities	5	Cleaning materials	1
		Tools	2
		Family latrines	4
		Family solid waste	3

Step 4: Interpret and compare results

Results of different sub-groups may vastly differ from each other. It is okay. What is important is that participants learn to identify needs and determine priorities. Differences in results also enable sub-groups to discuss their perspectives among each other. The process may lead to consensus or at least buy-in.



Step 5: Use the data to discuss the next steps

After the discussion, the facilitator will consolidate and present the data so that disaster-affected participants, along with the facilitator, can agree on the priority needs and their final ranking.

D. Summary

- A successful emergency response begins with a good assessment. A disaster needs assessment has two purposes. First, inform the response plans and priorities. Second, identify the external capacities and resources needed to close the gap if unavailable within the organisation.
- One of the ways to speed up emergency response is to know what to prioritise. Needs prioritisation facilitates quicker decision-making and coordination of activities.
- A general ranking process used in hygiene promotion includes the following steps: Explain the exercise, diversify the participant group, facilitate the ranking process, interpret and compare results, and use the data to discuss the next steps.

1.3 Identify and analyse different elements and relevance of measures for hygiene promotion in emergencies

A. Introduction

Hygiene promotion is used to help limit the risk due to the emergency due to overcrowding and poor sanitation. This also can influence the participation of the affected population in programme activities. In general, there are three distinct elements related to hygiene promotion in emergencies.

B. Elements of hygiene promotion

Reducing high-risk hygiene practices

A comprehensive understanding of the connections between hygiene risks, tasks of the programme team, and responsibilities of the affected group should



be used as the plan's basis and prioritise assistance. The flow of information should also be adapted and targeted to the appropriate audience.

During the emergency phase, the lack of access, difficult living conditions, and overcrowding pose a significant health risk and trigger disease outbreaks. Developing trust and respect between affected populations and agencies is essential to the success of health promotion activities. This can be done by listening to people's anxieties and concerns.

In the early stage of a disaster, mass media and social media are the primary tools WASH promoters can use to ensure affected populations receive important health risk information. They can also use different communication channels later on. They can organise community events like dance and songs that send health promotion messages. WASH promoters can also work with the education cluster to help spread hygiene programmes in schools.

Promoting appropriate use and maintenance of facilities

Once WASH facilities are available, the next step is to educate the participant on using and maintaining them properly. A promoter needs to convince community members that the proper use of facilities is essential to health. Hygiene promotion activities should consider the local cultural norms, religious beliefs, and social structures. It should ensure privacy and convenience and be adapted according to the suggestions or complaints of the communities.

The key to building WASH facilities acceptable to local communities is to understand their needs and constraints of the situation. Preferences, existing infrastructure, access to water sources, availability of construction material, and time are some factors that affect the design and implementation of WASH efforts.

Involving the affected communities in constructing WASH facilities at the onset can help build local ownership of the facilities. It helps inform the community of how these facilities can help lower health risks. Being aware of its value can also encourage community members to maintain them. Monitoring needs to be conducted periodically to check if the facilities are still relevant to the affected population. Adjustments may be taken according to user complaints and suggestions.

C. Promoting participation in programmes

One of the focuses of hygiene promotion is to drive active participation. All affected individuals should be actively encouraged. WASH promoters need to



strive to ensure all the representative groups in the affected community are included in implementing WASH efforts. Participation is determined by the acceptability and ease of access to WASH activities. Negotiate with the population and key stakeholders to define the terms and conditions for community mobilisers.

Tips for driving engagement for the project:

- Create urgency, so the participants feel a sense of urgency
- Be hyper-relevant by linking the programme with the community grievances and complaints
- Use vital local informants to identify the best method to communicate with the affected population
- Raise the bar high by not only making the goal specific but also using motivational tools
- Try different calls to action - test multiple options and identify what works for each target audience

Some activities that drive local participation are:

- Exploratory walks – Study team with/without participants walking through the study area to become familiar with the context. This purpose is to get specific information.
- Unstructured or structured observations could be structured by making a what-to-do list or without. The purpose is to find out existing information on water and sanitation.
- Interview key informant – Obtain context-relevant and specific information about the community that can help make WASH efforts more acceptable and accessible.
- Focus Group Discussion (FGD) – Useful for engaging particular segments of a community.
- Community mapping – Ask participants to create a map to present their area. It should identify places and elements that interest you.
- Three pile sorting

Doing FGDs can help WASH promoters find out what could encourage people to participate and what may be barriers to their participation. FGDs can be run according to the different groups in the community (e.g., men, women, PWDs, elderly). Effective facilitation (e.g., allowing each participant time to speak) is vital in getting the most out of the discussions. In some cultures, most hygiene-related matters are personal, and people tend to share this with trusted persons among peer groups only.



According to [OXFAM](#), hygiene promotion is related to three elements: handwashing, distribution of hygiene kits, and menstrual hygiene management.

Handwashing and hygiene kits

- Promotion should suit the context (e.g., culture, environment, gender)
- Method of communication use the mode and language that are acceptable and understood by the targeted community
- Identify the target's population's existing condition, behaviour, and promotional preferences (e.g., using local games or music to communicate messages to children).
- Consider women's duties related to caring and cooking.
- Include all latrine attendants in handwashing promotion activities.
- Find the most important motivator for the community. Health may not become their priority, religious or cultural norms could be the best motivator.

Menstrual hygiene management

- Provide education and demonstration on how to use and clean sanitary materials.
- Encourage girls and women who never used disposable pads or underwear to use them (e.g., how to insert the pads into underwear).
- Support girls and women who usually never use disposable pads or underwear to use them. For example, by demonstrating how to insert the pad into underwear, store and dry them.
- Demonstrate how to dispose of sanitary materials while ensuring the privacy of women and girls.

Hygiene promotion indicators

Indicators for monitoring the effectiveness of hygiene promotion interventions related to safe drinking water, hygiene practices, women's menstrual hygiene, safe excreta disposal, and community participation are shown in the table below.



Table 6: Measures for hygiene behaviour

Hygiene Behaviour	Indicators
Safe Excreta Disposal	% of people babies and children faeces disposed % of people used toilets (men, women, children)
Safe Drinking Water	% of people water handling practices to decrease contamination practices
Hygiene practices	Availability of soap for handwashing in all household Availability of handwashing facilities in the homes and latrines
Women's privacy and dignity around menstrual hygiene	Availability of sanitary materials and underwear
Community participation & representation	All sections of the community represent and consult all stages of the project The community members are satisfied with the facilities Responsibility is taken for the management and maintenance of water supply and sanitation facilities

E. Summary

- Hygiene promotion is used to help limit the risk due to the emergency due to overcrowding and poor sanitation.
- The lack of access, difficult living conditions, and overcrowding pose a significant health risk and trigger disease outbreaks.
- Developing trust and respect between affected populations and agencies is essential to the success of health promotion activities.
- Hygiene promotion activities should consider the local cultural norms, religious beliefs, and social structures. It should ensure privacy and convenience and be adapted according to the suggestions or complaints of the communities.
- The key to building WASH facilities acceptable to local communities is to understand their needs and constraints of the situation.



1.4 Identify key aspects on developing a sustainable hygiene promotion campaign and awareness

A. Introduction

Previous experience has shown that WASH facilities cannot be sustained without effective hygiene promotion. Developing sustainable WASH programmes are accessible WASH facilities combined with appropriate hygiene promotion.

B. Key aspects of sustainable hygiene promotion campaigns

The goal of sustainable hygiene promotion campaigns is to set up capacities and structures in the local community to help change behaviours in the long term. This is not always the priority or well placed right after a disaster strikes. In an emergency, WASH Promoters tend to aim for alignment first. That is, to use and strengthen the existing capacities and structures to pave the way for more sustainable hygiene promotion campaigns.

A key aspect of sustainable hygiene promotion is the integration of both the hardware (facilities) and software (behaviours) requirements of WASH efforts. Increasing hygiene awareness in the community can be done by Participatory Hygiene and Sanitation Transformation ([PHAST](#)). It should be clear to WASH promoters why hygiene promotion is essential, how the hygiene practices are recognised, what makes hygiene promotion activities effective, who are the priority group, and how it should be monitored.

Designing a hygiene promotion programme should be based on specific vulnerabilities, preferences, and needs of the affected communities. Some of the critical indicators are ([UNICEF,2006](#)):

- Identify health risks related to hygiene
- Use participatory methods that gather input from different groups of the community
- Make resources and facilities accessible for all groups to practice and continue proper hygiene practices
- Ensure that hygiene promotion and messages reach all people and address their behaviours



- Encourage affected community members to take ownership for maintaining facilities and spread responsibility equitably

Some indicators for measuring good hygiene practices in the community ([UNICEF,2006](#)):

- People using toilets in a proper and hygienical way
- People understand correct handwashing and know how to engage in this behaviour
- People wash their hands after defecation and handling children's faeces
- Parents understand how to dispose of children's faeces safely
- Toilets are maintained and cleaned by all intended users
- The family participates in family latrine programmes

C. Steps in a hygiene promotion campaign

Planning and preparation

Step 1: Assessment

- Identify critical risks in current practices and their level of understanding of the risks
- Determine which current practices transmit diseases
- Identify the current practices that are harmful to human health

Step 2: Consultation

- Include women, men, children, PWDs, the elderly and other groups of communities

Step 3: Initial planning and definition of objectives and goals

- Define the aim of the entire campaign
- Choose measurable indicators and means of verification
- Identify areas for intervention
- Set out action plans

Step 4: Planning and identifying target audiences and stakeholders

- Decide which segments of the affected population will be targeted
- Determine important stakeholders to influence



Step 5: Planning communication campaigns and modes of intervention

- Decide on initial key messages and modes of communication
- Define the initial interventions for media campaigns, define the best locations and platforms to reach target groups
- Choose advocacy and training needs for stakeholders

Step 6: Recruitment, identification and training of workers and outreach system

- Base training and recruitment (skills, systems, and approaches)
- Interview stakeholders and key informants
- Implementing defined actions and continued assessment
- Evaluate hygiene promotion campaigns related to safe access to quality sanitation to satisfactory living conditions. The relevant indicators for the early emergency stage include (UNHCR 2015a):
 - $\geq 90\%$ of households have soap exist in the house (which can be presented within 1 minute),
 - $\geq 60\%$ of households can name 3 of the 5 circumstances in which it is critical to wash hands
 - ≤ 500 affected people/IDPs per hygiene promoter
 - Availability of 450 grams/person/month of soap.
- Reassess, adapt and redesign hygiene promotion campaigns

Planning timelines: The hygiene promotion needs to be completed within three months of the displacement emergency. It also needs to be redesigned every six months based on the monitoring.

D. Summary

- The goal of sustainable hygiene promotion campaigns is to set up capacities and structures in the local community that will help change health behaviours in the long term.
- In an emergency, WASH Promoters tend to aim for alignment first. That is, to use and strengthen the existing capacities and structures to pave the way for more sustainable hygiene promotion campaigns.



1.5 Identify key issues and good practices on hygiene promotion measures in different types of emergencies

A. Introduction

Hygiene Promotion interventions in different types of emergencies related to the intensity and scale of the intervention, affecting the level of public health risk.

B. Key issues on hygiene promotion in different types of emergencies

Health promotion activities should be aligned to the nature of the emergency and the local context. Hygiene promotion interventions also change depending on the phase of the emergency it is designed and implemented. In general, the early stages of the emergency will be characterised by the need to at least provide information to the affected population. Still, a more interactive approach should be used as soon as possible. The general issues affecting hygiene promotion in emergencies are:

- Health problems related to sanitation
- Appropriate use and maintenance of WASH facilities
- Promotional method for delivering health messages
- Communication gaps
- Traditional beliefs and practices
- Contamination risks
- Gender issues
- Evaluation and monitoring activities
- Team integration
- Action prioritising

C. Good practices on hygiene promotion in different types of emergencies

Hygiene promotion in emergencies generally aims to control the spread of diseases because of poor hygiene and sanitation practices. Diseases usually spread in emergency contexts include diarrhoea, cholera, hepatitis E and typhoid. Hygiene promotion covers four main areas: domestic hygiene, personal hygiene, water hygiene, and food hygiene.



Domestic Hygiene:

- Build a latrine, use it properly, and keep it clean
- Dispose of baby and child faeces safely in the latrine
- Keep backyard and community areas free from standing water, rubbish, and animal waste
- Recycle rubbish as much as possible
- Dispose of medical waste safely

Personal Hygiene:

- Wash hand with soap after using the toilet and handling children's faeces
- Brush teeth every day
- Wash face with soap and water
- Keep clothes clean
- Keep fingernail short
- Change menstrual pads as much as needed

Water Hygiene:

- Protect water resource
- Cover water container
- Use a cup or big spoon to take water from the container, do not use your hands
- Wash water container regularly
- Treat water from all resources - it can be done with ceramic filter or boil water for drinking or cooking purposes

What promoter can do:

- Initiate discussions with the community's members about hygiene, including community leaders, women, decision-makers, caregivers, etc. Make sure they understand the purpose of good hygiene to stop the spread of diseases.
- Familiarise themselves with the preferred method of the local community for collecting and storing water, keeping food, washing, disposing rubbish, and using latrines (if any).
- Take care of households where people are sick.
- Be a good role model in the community such as modelling desired behaviours (e.g., cleaning latrine after use, washings hands, throwing rubbish in its proper place
- Work with local health or school to improve their sanitation and hygiene.



D. Summary

- Health promotion activities should be aligned to the nature of the emergency and the local context. Hygiene promotion interventions also change depending on the phase of the emergency it is designed and implemented.
- Hygiene promotion in emergencies generally aims to control the spread of diseases because of poor hygiene and sanitation practices. Diseases usually spread in emergency contexts include diarrhoea, cholera, hepatitis E and typhoid.
- Hygiene promotion covers four main areas: domestic hygiene, personal hygiene, water hygiene, and food hygiene.

1.6 Identify key issues and good practices in establishing WASH committee in emergencies

A. Introduction

WASH committees are usually established to ensure the long-term care of WASH infrastructure. This community-based maintenance and monitoring system looks into the state of WASH infrastructures such as latrines and drainages, and water supply to produce reports quickly.

B. Key issues in establishing WASH committee in emergencies

WASH committee is established to ensure regular maintenance and infrastructure sustainability, such as cleaning the latrine or taking care of water points to avoid breakdowns. All WASH infrastructure should be usable and well maintained. This can also be done by the involvement and support of the camp population. Any activities will be determined based on coordination between the WASH committee and other sector providers in the camp.

Camp management agency carries out the responsibility of the physical infrastructure of the camp. To ensure life-saving services, initial maintenance needs to be under the WASH provider's direct administrative and financial management. WASH committees support and play a critical role in the



maintenance and operational tasks. In the longer term, the duty carried out by administrative and financial management of regular operations and maintenance work will be moved to WASH committees and national authorities.

WASH committees take responsibility for sensitising the camp population on proper use, maintenance and cleaning WASH infrastructure. Roles and responsibilities and regulations and rules should be agreed between the WASH committee and the camp population to provide a well-functioning monitoring and maintenance system. A daily work plan for inspections and maintenance activities should be established. Gaps should be reported to WASH providers.

For example, [In Kadigor Village in Kachina Union of Bhaluka Upzila](#), there is a committee consisting of 11 members: 5 men and 6 women. They held meetings every two months to discuss progress and help solve problems. The National Task Force trained these WASH village committees on sanitation.

In [Ethiopia](#), water committees were established and underwent comprehensive training for hygiene and sanitation education, recording financial flows, maintaining hand pumps, and managing water systems. The aim is to build capacity to oversee day-to-day operations and set up policies such as how much water should be charged to cover maintenance costs. The role of committees is not limited only to management and logistics; it also elevates women's position in the community, in which at least 50% of committee members are women.

C. Good practices in establishing WASH committee in emergencies

When establishing WASH committees, it is essential to encourage their sense of responsibility and to develop their capacity to take care of the operation and maintenance of WASH facilities on their own. In the case in [Ethiopia](#), Voss Foundation and its partners held training for the water management committee as an integral part of every proposal on the project. The villagers were trained in management skills to ensure lasting effects on the health and development both for communities and individuals. One example in this programme is how they elevate women to positions where the composition of the committee members is at least 50% are women. They encourage women's leadership to facilitate shifts in attitudes of gender equality, which allows greater social mobility. By serving on water committees, women get more opportunities to build power and influence and create a ripple effect of changes they initiate in their community.



Good Practices

Another example of a WASH committee is in Iligan City. The project supports three different WASH committees: BAWASA, CWA, and the school. The committees were established to help maintain the hardware aspect of WASH efforts. Each of the committees has different roles and responsibilities. BAWASA is a water committee consisting of community members responsible for operating and maintaining the sanitation and water facilities. Every active member must undergo training in accounting, organisational development, general hygiene and sanitation, and maintenance for pumps. Their duties include

- Maintain WASH facilities
- Collect monthly water fees
- Observe and oversee the regulations established by the board of directors

The Community Water Association, established by Iligan City Water Works, monitors usage of piped water according to communal tap standards. They also contribute to proper and regular maintenance. The School Water and Sanitation Association encourages good hygiene behaviour to prevent diseases and proper use of WASH facilities like latrines. The committee consists of the principal, teacher, two students, and a member of the parent association.

D. Summary

- WASH committees are usually established to ensure the long-term care of WASH infrastructure.
- When establishing WASH committees, it is essential to encourage their sense of responsibility and to develop their capacity to take care of the operation and maintenance of WASH facilities on their own

1.7 Identify key issues and good practices in menstrual hygiene management

A. Introduction

Menstrual Hygiene Management (MHM) is crucial for women and adolescent girls. Managing menstruation during emergencies may be more challenging because of the limited reproductive health services and safe menstrual hygiene materials right after a disaster



MHM in Emergencies

First, it is necessary to analyse how women and girls manage their menstrual cycle daily in emergencies. For example, [in Somali](#), where women mostly come from rural areas, they have space for privacy but have limited access to MHM products. Meanwhile, women from more urban areas such as Haiti mostly use washable clothes, disposable pads, or mixed. Selection is based on cost, availability of the products, facilities, and daily activities.

Meanwhile, women managing their menstrual period housed in camps have extra challenges. Due to limited space, women can't do MHM in private areas. For instance, Somali women in the IDP camps couldn't make the natural approach of bleeding freely and were forced to use personal sanitary pads or cloth. Some Somali women find pieces of rag from rubbish bins to use. They were also forced to find ways to dispose of the materials so that people in camps won't notice. This required a lot more effort in an already very stressful situation.

[In the Philippines and Haiti](#), women resort to various ways to deal with menstrual periods due to poverty and lack of private spaces. Hygiene is also an issue because of poor toilet facilities and clean water for washing. Some camps charge for the use of the facilities. They are also susceptible to attack or rape in the toilet facilities, especially at night. It is essential to provide adequate MHM facilities to no more prolonged need to use the toilet at night. Some considerations when designing and implementing MHM programmes:

- Daily activity
- Cultural norms
- Environment
- Water availability
- Affordability
- Access to facilities

Good Practices

Based on peer-reviewed 51 papers related to menstrual response in an emergency, the practices that should be done to improve MHM among girls and women:

- Do consultation with women and girls before implementing and designing interventions
- Menstrual support items should also be included (soap, underwear, torches), also focus on providing adequate facilities



- Issues such as sustainability, inclusion, and equity should be considered when designing MHM programmes
- Channels related to intervention delivery should be researched
- Train staff to create competent staff for assessment and delivery of MHM activities
- Coordinate responses with other actors and share experiences
- Adjust indicators in accordance with customary and cultural practices
- To check their effectiveness, test tools first
- Monitor and evaluate interventions with other relevant actors in the humanitarian community

B. The needs of menstruating adolescents' women during emergencies

Some needs should be prepared for women during emergencies, such as:

1. **Women need options on how to manage their menstrual flow hygienically and discreetly. For example, providing affordable, accessible, and culturally acceptable menstrual hygiene pads.**
2. **Women need dedicated and private areas and facilities for washing clothing used during menstrual periods. They also need soap, buckets, drying lines, and underwear.**
3. **Women should be able to have access to clean and affordable water.**
4. **Women should have access to safe and private toilet facilities close to the camps and for women only.**
5. **Information and education about MHM should be available, especially for adolescent girls. The discussion should be interactive and consider the literacy level of the affected community and cultural acceptability. It should include using MHM products to manage period pain and smell.**

C. Critical issues in menstrual hygiene management

Meeting critical menstrual management needs of women and girls in an emergency is a response that promotes social inclusion and equality. Here are some critical issues related to hygiene management during an emergency:

- Supply disruptions due to limited access to menstrual hygiene products. Delivery of goods may be delayed because of the impact to supply chains. Individuals may resort to unhygienic alternatives.



- High demand and limited supply may drive up the price of sanitary products.
- Lack of privacy and limited access to facilities for changing, washing or cleaning during menstruation.
- Problems with accessing reliable information and support regarding menstrual health and hygiene.
- Access to clean water to maintain good menstrual hygiene may be more difficult.
- Women may not prioritise water for their menstruation needs, especially when women are responsible for collecting water.
- The environment is created for the disposal of products and waste management.
- Lack of disposal systems may make it hard for them to dispose of products and manage waste properly. This can increase health and environmental risks.
- Stigma is related to cultural practices associated with menstruation. In some cultures, menstruating women are considered impure and excluded from daily activities.

D. Good practices in menstrual hygiene management

Good Practices

There are several factors to consider when incorporating MHM when designing water supply, latrines, disposal facilities, and bathing units:

Water supply:

- Safe location, accessible to PWDs
- Water supply should be adequate

Latrines:

- Safe and private location, provided with door and internal lock
- Has adequate lighting
- Meets standards (SPHERE or UNHCR standard)
- Accessible for women and girls, including PWDs

Bathing units:

- Private and safe to use for women
- It has a door and internal lock
- Has sufficient lighting and install a fence around facilities for additional security
- Include seats for women and girls with disabilities
- Add Hooks for hanging clothes and drying towels
- Add extra drainage for menstrual blood

Disposal facilities:



- Provide disposal facilities inside the latrines such as a container with a lid or a chute from latrine to collection chamber
- If using containers, disposal and collection process should be regular and sustained
- If incinerators are available in medical facilities, negotiate its shared use. Otherwise, separate disposal and landfill can be built.

Other good practices:

- Consult girls and women for changing, washing, thoroughly drying and/or disposing of sanitary materials
- Train shelter staff on the basics of MHM
- Build shelter which ensures girls and women privacy
- Gather feedback and manage challenges experienced by girls and women

E. Summary

- Meeting critical menstrual management needs of women and girls in an emergency is a response that promotes social inclusion and equality.
- There are several factors to consider when incorporating MHM when designing water supply, latrines, disposal facilities, and bathing units

1.8 Identify key issues and good practices related to behaviour change communication in emergency including misinformation, disinformation, and hoax

A. Introduction

In emergencies, behaviour change communication is a tool used to encourage positive changes in attitudes and behaviour intended to improve overall health and well-being. Communication should be relevant, harmonised, timely, and sustained.



B. Key issues related to behaviour change communication in emergency

Key steps for developing communication objectives in an emergency are:

1. Identify SMART communication objectives
2. Establish SMART indicators
3. Establish references point
4. Set targets
5. Choose the frequency for data collection and sharing
6. Link monitoring and evaluation with objectives and indicators

When establishing SMART objectives:

- Focus on the behaviour you seek to change
- Use only one action verb in each objective
- Specific to a target population and behaviour
- Considering the available products and services needed during the emergency phase
- Adapt objectives to the different phases of an emergency

Some of the challenges related to behaviour change during an emergency response and possible solutions are shown in the table below.

Table 7: Key issues related to behaviour change in emergency

Challenge	Solutions
<p>Accessing Marginalised Groups People may be marginalized due to their ethnicity, race, religion, location, profession, and economic situation. These groups are not only less likely to be reached by the emergency response but also tend to be excluded in decision-making</p>	<ul style="list-style-type: none"> • Work with government and relevant agencies to identify marginalised groups • Create a partnership to increase access to these groups (e.g., HelpAge Intl.) • Seek the support of local leaders on how to identify and engage marginalised groups • Involve representatives of marginalised groups in the rapid assessment
<p>Reaching Mobile Populations Reaching mobile populations is challenging, but it is important to target them as they may be affected by the emergency and spread to other areas.</p>	<ul style="list-style-type: none"> • Determine media channels that can be accessed from different locations (e.g., using mobile phones or radios) • Craft easy-to-understand basic information and key messages that locals can easily share within their communities



Lack Of Trust

Anxieties and fears usually drive a lack of trust in information. This can reduce the effectiveness of behavioural change communication activities.

- Harmonised approach to spread messages. It is important to ensure that messages are clear, factual, and the same across the partners.
- Engage local mobilisers as liaisons between community members and the emergency response team
- Engage mobilisers as connectors or liaisons between community members and the emergency response team
- Involve local leaders or key people in designing and implementing the behavioural change strategy. Trust can be earned when community members see that their leaders trust the emergency team and are involved in decision making

Stigma

Stigmatisation can lead to anxiety, distrust, and fear that undermine social cohesion

- Involve survivors in community outreach. This can reduce people's anxieties and fears by recognising them as community members.
- If appropriate and safe, ask survivors to do testimonials of how they overcome diseases and what are the risks if not prevented or treated properly

Weak Health System

A weak health system does not have sufficient structures, resources, personnel, and management systems to work effectively and sustainably.

- Map all relevant stakeholders and partners to identify strengths and weaknesses within the current system and develop a strategy to improve them.
- Use current coordination mechanisms within countries to coordinate response-related activities.
- Identify good practices, share research findings, and maximise programme materials

Psychological Effects of the Crisis

A crisis, together with the damages and losses associated with it, can cause grief and psychological trauma. These issues should be considered when crafting a preparedness and response plan.

- Establish coordination mechanisms to link up existing groups supporting this aspect of the overall emergency response (e.g., microfinance associations, self-help groups of survivors).
- Establish a referral system among partners to ensure the most appropriate services for those dealing with grief and psychological trauma.



Reluctant to declare a state of emergency at the right time

Delays in declaring the State of Emergency can delay response efforts

- Delays in declaring the State of Emergency can delay response efforts.
- Ensure government partners develop the preparedness plan to increase their understanding of the importance of rapid response.
- Use alternative channels to reach and support communities. Set up networks of social mobilisers and seek help from local leaders to encourage risk reduction behaviour.

Misinformation and rumours

Inconsistent messaging may lead to confusion and misinformation. It is essential to design and implement an integrated information system

- Set up rumour logs
- Conduct media monitoring
- Make sure spoke persons have credibility and have been trained
- Ensure messages are simple, clear, and consistent

Source: [USAID,2016](#)

One of the most essential elements of behaviour change communication activities in emergencies is the communication channel. A message, no matter how well crafted it is, will not reach its intended audience if it is conveyed through a communication channel that does not meet the needs or preferences of the target audience. Communities can also be engaged by running various activities. Please see some examples below:

- Public dialogue – to address questions on a specific topic
- Community meeting – to discuss issues with community leaders
- Village literacy fair – to share information on a range of subjects
- Mobile cinema – to use film showing to convey a message, typically followed by a Q&A
- Listening group – to listen to people of influence discuss specific issues
- Print media – to distribute reading material such as cartoon strips and leaflets
- Door-to-door sessions – to conduct household visits to discuss concerns and inform family members about healthy behaviours
- Storytelling – to tell a story that captures essential messages and the importance of healthy behaviours
- Quiz competition – to see how much information is retained by the community about a specific topic
- Dance and concerts – to bring together communities and spread messages using events



Table 8: Communication channels to use in emergencies

Channel	The channel appropriate for...
Mass Media	<ul style="list-style-type: none"> Modelling behaviour Reducing taboo and stigma Suitable for communication with low literacy audiences Increasing awareness across audiences
Print Media	<ul style="list-style-type: none"> Support other communication tools Provide detailed information Engaging with policy and decision-makers
MID Media	<ul style="list-style-type: none"> Engaging communities Facilitating discussion and reflection within communities Modelling behaviour
Interpersonal Communication	<ul style="list-style-type: none"> Engaging two-way communication Creating community action plans Imparting skills Handling conflict Promoting dialogue
Social and Digital Media	<ul style="list-style-type: none"> Engaging young people Reaching remote audiences Creating networks of communities

Source: [USAID,2016](#)

Behavioural changes are influenced by an individual's background, history, physiology, education, cultures, norms, social standing and more. One of the key motivating factors for behavioural change is the potential for better health and disease prevention. Some of the determinants related to hygiene behaviours are:



Table 9: Determinants related to hygiene behaviours

External Determinants	
Socioeconomic status	Education and literacy Money
Environmental Constraint	Access to and quality of technology System problems such as funding or lack interest of stakeholders
Epidemiology	Impact of current policies such as charge for services and taxes
Policy	Current policies such as charge for services, taxes
Access to technologies and services	Availability of essential hygiene products and technologies Physical access including distances, availability of public transport, and road condition Availability of drugs, blood, medical supplies, health personnel Quality of services Days and hours of services How providers treat the clients
Skill	Confidence and skill of the person who will adopt the new behaviour Difficulty of adopting the new behaviour Ease for people to remember what and how to do something
Cultural norms	The fit of new behaviour to cultural beliefs, practices, and values
Internal Determinants	
Emotion	Feelings towards why one should do something
Intention	Awareness of feasibility and the challenges of doing something
Practical Knowledge	Knowledge associated with how to do something
Perceived consequences	Connection of the new behaviour to perceived benefits or adverse effects
Perceived Norms	Perception of whether new behaviour is acceptable to prevailing norms
Self-efficacy	Level of confidence of a person in themselves to adopt the behaviour

Source: [Environmental Health Project, 2004](#)



The table below shows the behavioural change model's components and how change occurs at the individual, interpersonal, and community levels.

Table 10: Components of a behaviour change model

Level	Model/theory	Focus
Individual	Theory of reasoned action	Individual's behaviour intention
	Stages of changes	Needs to identify the stages first, readiness to change
	Health beliefs model	Individual's perception of a health problem, including how to manage and prevent this
Interpersonal	Social learning	Dynamic factors which environment, behaviour, and personal factors interact continuously
	Community organisation/participatory	Community drives with various levels of control. Changes depend on collective action and participation
Community	Diffusion of innovations	How new ideas, practices, products spread in society

Source: [UNHCR,2017](#)

C. Good practices related to behaviour change communication in emergency

Good Practices

Social and Behaviour Change Communication Campaign: Posters

Purpose: Some images were designed for the Social and Behaviour Change Communications (SBCC) campaign in the [Senegalese school communities of Kaolack and Rufisque](#). SBCC, a strategy that supports public health initiatives, uses communication techniques to encourage changes in family members' attitudes, knowledge, and behaviours related to their children learning to read. The five posters found were placed in public spaces in Kaolack and Rufisque and served as one of the many forms of campaign material.

Background: The campaign in Kaolack included radio broadcasts, community meetings, community theatre, and posters within three months, giving messages related to what parents and family members could do to help their children learn to read. The campaign's objective is to encourage families to promote the importance of shared responsibility in helping improve the literacy of children and increase the confidence of parents in their ability



to facilitate their children's success in reading. The campaign also helped overcome the lack of reading materials in the community by providing books that children and families could borrow.

Goals: For children to spend time reading and/or practising their literacy skills every day. For families to engage in reading-related activities with their children.

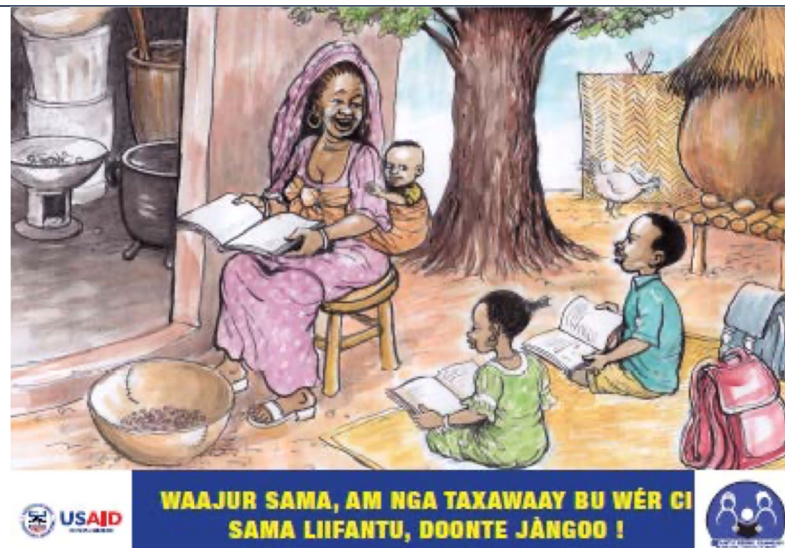


Figure 1. This poster says: "My dear parent, even though you are not educated, you are interested in my reading!"

Source: [USAID,2012](#)

D. Summary

- In emergencies, behaviour change communication is a tool used to encourage positive changes in attitudes and behaviour intended to improve overall health and well-being.
- Communication should be relevant, harmonised, timely, and sustained.
- Identify SMART communication objectives
- One of the most essential elements of behaviour change communication activities in emergencies is the communication channel. A message, no matter how well-crafted it is, will not reach its intended audience if it is conveyed through a communication channel that does not meet the needs or preferences of the target audience.
- External and internal determinants influence behavioural changes
- Behavioural change occurs at the individual, interpersonal, and community levels.

4.2

Element 2. Provide technical guidance on vector control

2.1 Identify and analyse standards related to vector control on health risks in an emergency

A. Introduction

Vector control is an integral part of any WASH effort. All WASH actors must work together to keep the community's surroundings free of high-risk disease vectors. This applies whether the affected people live in camps, collective facilities, host families, rented units or occupying land.

B. Vector control on health risks

Inadequate waste management attracts rats and insects, harbouring and transmitting pathogenic organisms. Poorly kept latrines can serve as a breeding ground for flies, while stagnant water can serve as a breeding ground for mosquitos. It is important not to underestimate the psychological benefits of effective disease vector management. Removing waste and stagnant water, proper toilet usage, and practising good personal hygiene can lift the morale of affected community members.

Any arthropod or animal that transports and spreads infectious diseases from an infected animal to a person or from a human to another human is considered a vector. This can happen through bites (e.g., mosquitoes), penetration (e.g., guinea worm), or through the gastrointestinal tract (e.g. contaminated food or drink). In many humanitarian contexts, vector-borne diseases are the leading causes of illness and death. Mosquitoes, flies, and lice are the most common vector; however, rodents can also be vectors. Vector is divided into a biological vector, mechanical vector, and arthropods. Different vectors could result in different health risks. Other nuisance vectors can transmit a range of illnesses in camps where people and animals may be forced to live together in close quarters. This table shows various vectors related to the risks retrieved from UNHCR Handbook for Emergencies (2007).



Table 11: Vectors and health risks

Vector	Risks
Flies	Eye infections, diarrhoea
Mosquitoes	Malaria, filariasis, dengue, yellow fever, encephalitis
Mites	Scabies, scrub typhus
Lice	Epidemic typhus, relapsing fever
Fleas	Plague (from infected rats), endemic typhus
Ticks	Relapsing fever spotted fever
Rats	Rat-bite fever, leptospirosis, salmonellosis, Lassa fever

Source: [UNHCR \(2007\)](#)

Common diseases vector in an emergency include mosquitoes, flies, bedbugs, fleas, lice, ticks, mites, rodents, and other small scavenging animals (e.g. cats and dogs). They lead to various diseases, such as yellow fever, Japanese encephalitis, *filariasis*, typhus, murine typhus, plague, relapsing fever, trench fever, trachoma, sleeping sickness, *leishmaniasis*, and Crimean-Congo.

C. Standards related to vector control in emergency

Planning and implementing a vector control strategy requires setting impact objectives, timelines, and milestones. Specific reduction in impact indicators should be set as goals that must be met by a specified date. Changes in human behaviour attitudes, vector density, infection rate, transmission rate, parasite prevalence, and disease morbidity and death are all relevant indicators.

Disease prevention and vector control begin at the household level but extend to all camp sectors, necessitating medical support from professionals to develop a suitable control plan. The vector control measures should focus on the quantity and density of vectors and human-vector breeding locations. Sphere defines the standards related to vector control in an emergency as follows:



Table 12: Standards of vector control in emergency

Standard	Indicators	Key actions
<p>Vector control at settlement level:</p> <p>People live in an environment where vector breeding and feeding sites are targeted to reduce the risks of vector-related problems</p>	<ul style="list-style-type: none"> Percentage of identified breeding sites where the vector's life cycle is disrupted 	<p>Assess vector-borne disease risk for a defined area</p> <hr/> <p>Align humanitarian vector control actions with local vector control plans or systems and with national guidelines, programmes, or policies</p> <hr/> <p>Determine whether the chemical or non-chemical control of vectors outside households is relevant based on an understanding of vector life cycles</p>
<p>Household and personal actions to control vectors:</p> <p>All affected people have the knowledge and means to protect themselves and their families from vectors that can cause a significant risk to their health or well-being</p>	<ul style="list-style-type: none"> Percentage of the affected people who can correctly describe modes of transmission and effective vector control measures at the household level Percentage of people who have taken appropriate action to protect themselves from relevant vector-borne disease Percentage of households with adequate protection for stored food 	<p>Assess current vector avoidance or deterrence practices at the household level as part of an overall hygiene promotion programme</p> <hr/> <p>Use participatory and accessible awareness campaigns to inform people of problem vectors, high-risk transmission times and locations, and preventive measures</p> <hr/> <p>Conduct a local market assessment of relevant and effective preventive measures</p> <hr/> <p>Train communities to monitor, report and provide feedback on problem vectors and the vector control programme</p>

Source: [Sphere \(2018\)](#)



Moreover, there are five key elements for vector control or also known [as Integrated Vector Management \(IVG\)](#) which consists of the following:

- **Advocacy, social mobilisation, and legislation**
All relevant agencies, organisations, and civil society must promote these principles in their development strategies; regulatory and legislative controls for public health must be established or strengthened, and communities must be empowered.
- **Collaboration within and between the health and other sectors**
All opportunities for collaboration within and between the public and private sectors are considered; planning and decision-making are delegated to the lowest administrative level feasible; and improving communication among policymakers, administrators of vector-borne illness prevention programmes, and other essential partners.
- **An integrated approach to disease control**
Making the most efficient use of available resources by employing a multi-disease control strategy; integrating non-chemical and chemical vector control approaches; and integrating with other disease control measures.
- **Evidence-based decision-making**
Adapt tactics and treatments to local vectors ecology, epidemiology, and resources, led by operational research and monitored and evaluated regularly.
- **Capacity building**
Based on the scenario analysis, the creation of needed infrastructure, financial resources, and appropriate human resources at national and local levels to run vector control programmes.

D. Summary

- All WASH actors must work together to keep the community's surroundings free of high-risk disease vectors.
- Any arthropod or animal that transports and spreads infectious diseases from an infected animal to a person or from a human to another human is considered a vector. This can happen through bites (e.g., mosquitoes), penetration (e.g., guinea worm), or through the gastrointestinal tract (e.g. contaminated food or drink).



- Common diseases vector in an emergency include mosquitoes, flies, bedbugs, fleas, lice, ticks, mites, rodents, and other small scavenging animals (e.g. cats and dogs). They lead to various diseases, such as yellow fever, Japanese encephalitis, filariasis, typhus, murine typhus, plague, relapsing fever, trench fever, trachoma, sleeping sickness, leishmaniasis, and Crimean-Congo.

2.2 Conduct needs assessment and prioritisation on vector control in emergency situation

A. Introduction

Disease vector management programmes must be developed as quickly as possible, in the same way that clean water and sanitation are provided. WASH actors must guarantee that high-risk disease vector populations are quickly managed from the beginning of disaster response. The promoter should conduct an appropriate assessment to identify the vector handling management to plan a vector control programme.

B. Vector control needs assessment

Assessment and information needs

The affected community's demographics, vectors, endemicity, transmission, and response capability data are essential for planning and implementing control measures. Information is needed to:

- Identify existing health priorities and future health hazards;
- Assess the capacity and resources available to respond; and
- Gather baseline data for monitoring and assessing the efficacy of planned actions.

For a promoter, it is essential to gather the following information:

- The background of the emergency;
- Transport, roads and infrastructure, including access to the nearest airport;
- Security;
- Communications;



- Environments and climate;
- International and national partners' locations and activities;
- Coordination mechanisms in the assigned area.

This table lists examples of data needed for vector control assessments.

Table 13: Data needed in vector control assessments

Information	Detailed information
Demographics	Estimated total population, estimated mortality per 10.000 per day, locations of the affected community, measurable health indicators, distribution and settlement patterns, ongoing movement/mobility, type and location of dwellings, main professions, gender roles, and main language spoken
Vector disease transmission	Previous disease related to vectors, potential breeding sites, seasonality of risk (e.g. climate, season, rainfall, temperature)
Vector disease morbidity	Review past and present medical records from health facilities in the affected locations, a rapid parasite prevalence survey at the health facility or mobile clinic
Vector disease mortality	Vector admission and deaths, aggregated by age and sex
Vector disease outbreaks and control efforts	Presence of known risk factors, number of cases and death in previous outbreaks, and a review of past and present vector control efforts in the area
Population knowledge and practices	Knowledge, attitudes, and beliefs regarding vector control, current usage of protective measures, health care provision by the host government, and other practices that could increase exposure to vectors
Health policy, planning, and services	Current health policy, financial mechanisms, and responsibilities for planning and implementation in all levels

Source: [WHO \(2012\)](#)



Phase in vector control needs assessment

[The assessment process](#) consists of the following:

1. Preparatory phase

An initial situational review is needed for screening and scoping of activities. In this phase, the promoter should form committees/working groups or networks, and then identify relevant key partners and representation from other organisations. Initiate meeting with them to develop a timeline and responsibilities matrix.

2. Needs assessment phase, with two sub-phases:

- Situation analysis (including problem analysis)

In situation analysis, the promoter must ensure that the assessor does a detailed scenario analysis and identifies significant obstacles preventing the present programme from operating and achieving its objectives. Recommendations on how to address these obstacles are also needed.

- Identification of needs and opportunities

In the identification phase, the assessor prepares a report based on the strategies to determine needs and opportunities and evaluates the need assessments report and publishes its views as an annexe. Also, it is a good idea to get feedback from supporting committees, working groups, or networks.

3. Programme realignment phase

In this phase, the vector control programme partners implement the strategic plan, mobilise resources, and regularly monitor and evaluate progress. Any programme realignment or restructuring should be well-planned and implemented in stages to ensure that the ability to respond to outbreaks and crises is maintained at all times.

Types of need assessment

The vector need assessment includes [three types of assessment](#):

- **Epidemiological assessment**

An epidemiological assessment is conducted to determine the main vector species and their characteristics. Measuring the disease burden necessitates accurate, up-to-date information on disease incidence, prevalence, and mortality and information on missed workdays, school days, seasonal changes, subpopulations impacted, the proportion of outpatients affected, and other factors. For each vector-borne disease,



data is required and overlay mapping to identify regions where two or more diseases coexist.

- **Vector assessment**

Vector assessment is conducted to determine the incidence and prevalence of all diseases. Planning vector control methods and selecting the most effective approaches require a thorough understanding of potential vectors' biology, ecology, and behaviour. Professional entomologists and other trained individuals are needed for this, and their results must be communicated to decision-makers at the national, district, and village levels. This assessment must include these five aspects:

1. **The ecosystems**
2. **The role in disease transmission;**
3. **The habitat and seasonality;**
4. **The behaviour; and**
5. **The susceptibility to insecticides.**

- **Stratification**

Stratification is conducted to classify geographical areas based on the burden of vector-borne diseases to guide resource allocation to the appropriate areas. In its most basic form, stratification is used to distinguish between locations within a country with varying illness incidence rates based on population census data. In a more complicated kind of it, additional factors are included, such as vegetation and altitude of the areas.

C. Prioritisation findings

Prioritisation's meaning

The affected community consists of many groups, and there may be many needs among people. Some are more pressing than others, not just in terms of being necessary for existence but also in being central to well-being and attaining fundamental rights. A comprehensive need assessment includes activities required to satisfy the fundamental rights and prioritises some problems and related actions. Prioritisation is essential for ensuring that critical requirements are met first, both short- and long-term. Priorities are established using a combination of 'bottom-up' and 'top down' approaches.

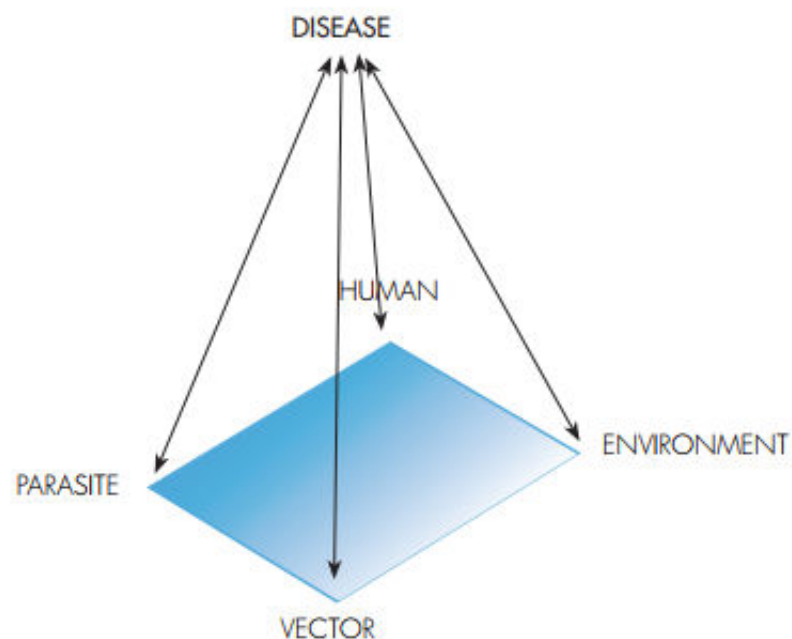
Local determinants as a tool for prioritisation



All disease factors must be recognised to guarantee a complete approach to disease prevention and proper disease control measures. When identifying prioritisations for vector control, the focus is to find out the local determinants. This will be crucial for local stakeholders in making decisions on vector control. However, diseases of lower priority should not be excluded from decision-making at this point. It is possible that in subsequent steps, the vectors of diseases of lower priority could be targeted at the same time as those of diseases of higher priority, resulting in more efficient resource use.

Even though the vector-borne disease control programme depends heavily on the parasite and the vector, we should not ignore the human and environmental determinants. This figure indicates the relationship between disease and its possible determinants shown in the table retrieved from WHO (2012).

Figure 2: The relationship between disease and its possible determinants



Source: WHO, 2012



Table 14: Possible determinants for diseases

Local determinants	Explanation
Parasite-related	What parasites or pathogens cause diseases? What is the current situation with pesticide resistance?
Vector-related	What are the most significant local vectors? When and where do vectors reproduce? What are the vectors' local densities and fluctuations? What are the vectors' characteristics?
Human-related	What are the population's distribution and structure? Where do the most vulnerable people live? Which populations are near the vector breeding grounds? Where do people get together? What are the population migrations patterns? What are the local attitudes and behaviours when it comes to vector-borne disease?
Environment-related	What are the patterns of rainfall? What are the ecosystems in the area? What is the purpose of land? What is the size of the breeding habitat in the water? Are there any other hosts for the pathogen?

Source: [WHO \(2012\)](#)

After the local determinants are identified, the next step is to **map them**. Participatory mapping of the determinants is helpful for understanding which areas are more at risk for vector-borne disease and which are at most risk. This phase should include local stakeholders and may need additional data such as existing maps, geographical information systems, etc. Moreover, a temporal analysis can be useful to identify the periods of increased risk for the disease (e.g., include a seasonal calendar).

A local analysis of vector-borne diseases determinants aids in identifying where and when vector-borne disease hazards arise. The research may reveal, for example, that communities living on the edge of a village or near a flood-prone region are at high risk of infection. This will be the basis for identifying which **determinants** to prioritise in the vector control programme in the short and long term.



D. Summary

- Disease vector management programmes must be developed as quickly as possible in the same way that clean water and sanitation are provided. The promoter should conduct an appropriate assessment to identify the vector handling management to plan a vector control programme.
- The affected community's demographics, vectors, endemicity, transmission, and response capability data is essential for planning and implementing control measures.
- Phase in vector control need assessments includes preparatory phase, needs assessment phase (situation analysis and identification of needs and opportunities), and programme realignment phase.
- Types of need assessments are epidemiological assessment, vector assessment, and stratification.
- In prioritising vector control programmes, the promoter can determine the local determinants, map them, and plan to tackle them properly.

2.3 Identify and analyse different elements and relevance of measures for vector control in emergencies

A. Introduction

Disease vector management measures should be designed as part of a broader affected population preventative health strategy. Various vector control approaches in emergencies should be recognised and understood thoroughly. Messages about the need for a clean environment free of household waste and stagnant water, appropriate latrine construction, and personal protective measures should all be included in the community health and education programme.

B. Elements of vector control

Vector control principles

The vector control programme will be successful if the vector species' density and lifespan/longevity are reduced. Longevity reduction is typically the more



cost-effective alternative in an emergency. On the other hand, nuisance control is only an issue of density reduction.

1. **Density reduction**

Environmental management (e.g. drainage, filling, levelling of depressions and borrow pits) or the application of pesticides are used to reduce the population density of vectors and nuisance species at breeding locations (i.e. larvicides). The target organisms must be susceptible to the chemical in the latter scenario. Furthermore, this chemical should not harm non-target species (e.g. fish) or people who drink water from the same source.

2. **Longevity reduction with pesticides**

The application of pesticides that kill adult vectors is required to reduce longevity. Although environmental management is the recommended method for lowering vector density, emergencies frequently necessitate insecticides for lifespan reduction due to the urgency of the problem and the danger of vector-borne disease outbreaks among sensitive populations.

Adult insecticides must be used in areas where the vector would rest, such as the interior surfaces of houses (i.e. Anopheles mosquitoes) or cracks in walls and other hiding places in the case of triatomid bugs. Furthermore, the target species must be sensitive to the chemical, and the chemical must not pose a health risk to the general public or spraying employees. As a result, specialist individuals must be in charge of the design and execution of these measures

Vector control methods

A vector control programme aims to minimise disease transmission by making the environment unsuitable for disease vector growth and survival. Preventing vector issues should be considered while designing and building camps since prevention is preferable to management. Moreover, public awareness and participation are essential for the programme's success. The main methods for vector prevention and control are as follows:

- Personal protection
- Environmental control and breeding site elimination
- Environmental sanitation
- Public awareness
- Chemical control measures (i.e. residual spraying, space spraying, insecticide-treated traps, selective-treated traps, selective larvicide, and use of rodenticides).



This table retrieved from [WHO \(2012\)](#) lists the available control methods for vector-borne diseases. The most common vector methods are divided into four groups: environmental, mechanical, biological, and chemical methods.

Table 15: Example methods used to control vector-borne diseases

Category	Question	Chogas disease		Trypanosomiasis	Japenesephasilis	Leishmaniasis	Lymphatic filariasis	Malaria	Onchocerciasis	Schistosomiasis	Trachoma	
		Dengue										
Environmental	Source reduction	+		+			+	+				
	Habitat manipulation				+		+		+	+		
	Irrigation management & design				+			+			+	
	Proximity of livestock						+				+	
	Waste management										+	
												+
												+
Mechanical	House improvement	+		+	+			+				
	Removal trapping		+	+		+						
	Polystyrene beads						+					
Biological	Natural enemy conservation	+		+				+		+		
	Biological larvicides	+		+			+	+	+			
	Fungi		+					+				
	Botanicals											
Chemical	Insecticide-treated bednets	+			+	+	+	+				
	Indoor residual spraying	+		+			+	+	+			
	Insecticidal treatment of habitat		+					+				
	Insecticide-treated targets											
	Biorational methods											
	Chemical repellents											

Source: [WHO \(2012\)](#)



Selection criteria

There are several vector control methods, and each of them has its advantages and disadvantages. Choosing the appropriate methods should consider efficacy, human and environmental safety, the danger of resistance developing, cost, community engagement, and support for policy and logistics. This matrix can help in identifying the benefits and limitations of each method.

Table 16: Choosing the appropriate methods for vector control

Category	Question	Effectiveness	Safety	Risk of resistance	Community participation	Affordability	Logistic and policy support	Selected methods
Environmental	Source reduction	+	+	-	++	-	-	..
	Habitat manipulation	...	..	..	..	..	..	..
	Irrigation management and design	...	..	..	..	..	..	..
Mechanical	House improvement	...	..	..	..	..	..	..
Biological	Natural enemy conservation	...	..	..	..	..	..	..
	Biological larvicides	...	..	..	..	..	..	..
	Botanicals	...	..	..	..	..	..	..
Chemical	Insecticide-treated bednets	...	..	..	..	..	..	..
	Indoor residual spraying	...	..	..	..	..	..	..
	Insecticidal treatment of habitat	...	..	..	..	..	..	..
	Chemical repellents	...	..	..	..	..	..	..

Source: [WHO \(2012\)](#)

Note:

++: highly applicable; +: applicable; ±: partly applicable; -: not applicable

Methods for multiple diseases

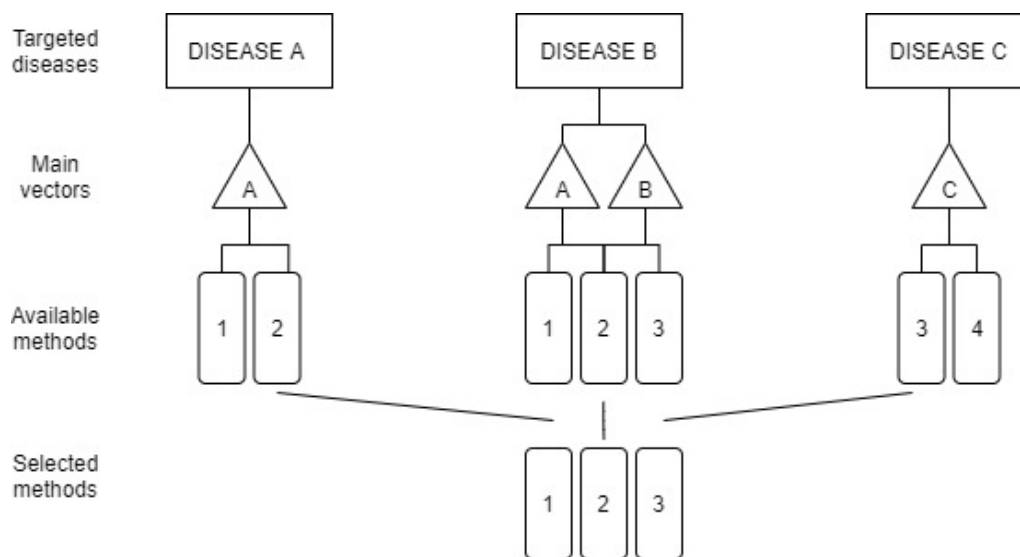
Multiple vector-borne diseases may occur in the same area. Decisions must be made about the vector control method for each disease and the relative relevance of each disease. Opportunities to conduct synergistic effects must



be discovered when several diseases are in the same region. As a result, vector control might be used to combat more than one disease—even the low-priority diseases that would not justify the control effort.

Retrieved from [WHO \(2012\)](#), this is the chart identifying vector control methods for multiple diseases cases.

Figure 3: Chart for a select method for multiple vector-borne diseases



Source: WHO, 2012

C. Relevance measures of vector control

After specific vector control methods are applied, they must be measured to track progress and identify the programme's success. However, most vector control measures are only applicable for a long-term project rather than a short project as those implemented in an emergency. This sub-section will emphasise some measures for vector control: environmental control measures, mechanical control measures, chemical control measures, and biological control measures.

Environmental control measures

Vector control programme depends on the appropriate environmental control measures, especially the safe facilities for the affected population, such as excreta disposal, solid waste management, wastewater disposal, site drainage, and vegetation control. This table shows some environmental control measures



Table 17: Environmental control measures detail

Environmental control	Measures
Excreta disposal	<p>One cubicle for 20 persons (maximum)</p> <p>Located 50 metres from any shelter</p> <p>Consideration for pregnant women, children, and disabled people</p>
Solid waste management	<p>Communal disposal at least 100 metres from the shelters</p> <p>Garbage container or household refuse pit at least 50 metres from the shelters</p> <p>A container of 100 litres per 10 families provided</p> <p>Segregation and safe disposal of medical waste</p>
Wastewater management and site drainage	<p>Less than 1 cm thick floating layer of expanded polystyrene beads to reduce the breeding of Culex mosquitoes</p>
Water supply	<p>Quality: Meet the quality standards for drinking water</p> <p>Quantity: 5 lcd temporarily, and 10 – 15 lcd for long-term</p>

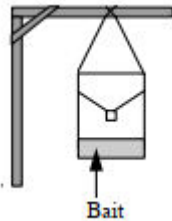
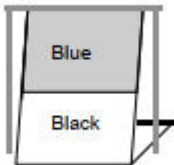
Source: [Lacarin \(1999\)](#)

Mechanical control measures

The most popular mechanical control traps. Traps are designed differently depending on the species to be controlled. Some do not pollute, and it is possible to use them with or without pesticides. When there is no vector control programme in place, these techniques are very selective and effective. They may be employed to cover a vast region while only targeting certain insect groups, such as tsetse flies. This table shows the example of traps.



Table 18: Mechanical control measures detail

Traps	Pictures	Explanation
Non-biting fly traps		<p>Consists of a plastic bottle which the upper side has been cut and placed down into the other part of the bottle</p> <p>Contains a mixed solution of water and glucose that attracts flies</p> <p>Hung minimum 2 metres above the ground, 15 metres from the health centre, and 5 metres from any larval sites</p> <p>The bait has to be changed regularly every 2 – 4 weeks</p>
Tsetse fly traps		<p>Consists of two pieces of cloth. The upper piece is blue, and the bottom one is black</p> <p>The screen is impregnated with a synthetic pyrethroid compound which colours with attract the tsetse</p> <p>There may be added such as cow urine in a pocket of the screen</p> <p>It is required four traps for every km²</p> <p>The screen has to be retreated every 2 – 3 months</p>

Source: [Lacarin \(1999\)](#)

Chemical control measures

Chemical control requires a thorough understanding of the ecology and behaviour of the species to be removed. Good management, logistical organisation, and safety precautions are essential components of such a project.

Table 19: Chemical control measures detail

Chemical control	Measures
Residual spraying	<p>For vectors and pests that are known to rest long enough in the resting place to pick up the lethal dose</p> <p>Conducted by a hand-compression sprayer or knapsack motorised sprayer</p> <p>Carried out in early morning or evening</p>



Space spraying	<p>It can be used from the ground, where special equipment such as portable fogging machines, backpack mist-blower devices, and vehicle-mounted fogging machines are required</p> <p>It can be used using an airplane to disperse chemicals over a larger region</p> <p>Requires expert and could be expensive</p> <p>Carried out in early morning or evening</p>
Larvicide	<p>For killing eggs and larvae before they reach the adult stage</p> <p>Limited use for malaria, unless the breeding site is very dominant</p> <p>Consider the water source as drinking water</p> <p>Can be spread from an aircraft and/or by hand</p> <p>Carried out any time of the day</p>
Dusting	<p>For lice and fleas</p> <p>Operated by hand</p> <p>Applied directly into the infected clothes in contact with the skin of the infected person</p>
Pesticides	<p>Example: Organochlorines (OC), Organophosphates (OP), Carbamates (C), Synthetic pyrethroids (PY)</p> <p>The lethal dose (LD) has to be measured</p>

Source: [Lacarin \(1999\)](#)

Biological control measures

Bacterial insecticides are non-polluting and safe to use. A poison released by the bacterial larvicide kills mosquito and fly larvae that ingest it. This method may be effective in mosquito breeding areas, although it has a shorter permanence than synthetic larvicides. The impact of biological control may be minimal in overcrowded areas where faeces matter accumulates quickly in pit latrines. This table shows the effectiveness of bacterial larvicides on mosquitoes and flies retrieved from Chevasse and Yap (1997).

Table 20: The effectiveness of bacterial larvicides on mosquitoes and flies

Bacterial Larvicides type	Mosquitoes	Flies
Bacillus thuringiensis israelensis or serotype H-14	Anopheles and Aedes	Blackflies
Bacillus thuringiensis israelensis or serotype H-1	-	Chrysomya
Bacillus sphaericus	Culex	

Source: [Lacarin \(1999\)](#)



D. Summary

- Vector control programme will be successful if the density and lifespan/longevity of the vector species are reduced.
- The main vector prevention and control methods are personal protection, environmental control and breeding site elimination, environmental sanitation, public awareness, and chemical control measures.
- In choosing the proper vector control methods, the promoter should consider efficacy, human and environmental safety, the danger of resistance developing, cost, community engagement, and support for policy and logistics of each option.
- After specific vector control methods are applied, they must be measured to track progress and identify successful programmes.

2.4 Identify key aspects on operation and maintenance of vector control system and facilities for continued health benefits

A. Introduction

The key aspects in implementing the vector control method must be identified to ensure the continuous improvement of the programme. Any vector control plan should be adaptable to changes. As a result, the decision-making process outlined in this part should be repeated frequently, and approaches must be adjusted as needed.

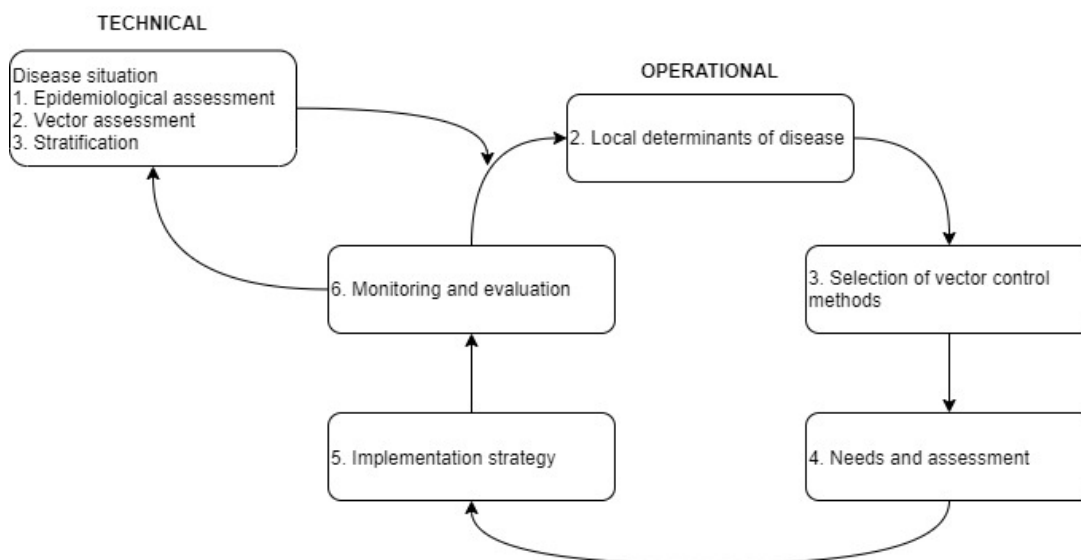
B. Key aspect on operation and maintenance of vector control system

Operation and maintenance strategy

Maintaining vector control systems is an integral part of feedback mechanisms. Operating vector control systems involves determining the local determinants of disease, selecting vector control methods, defining needs and resources, implementing the chosen strategy, and monitoring and evaluation. The diagram below from [WHO \(2012\)](#) shows how vector control systems' technical and operational aspects are integrated.



Figure 4: Technical and operational aspects of vector control systems



Source: WHO, 2012

The operational of vector control method should be detailed to the practical activities, such as when to implement, where to implement, who is responsible, and who should monitor and evaluate. This matrix will help the promoter break down the vector control method, especially when there are multiple selected methods.

Table 21: Practical question to detailed vector control method

Practical question	Vector control method		
	Method 1	Method 2	Method 3
Vectors targeted	(i.e. Aedes, Anopheles)	...	...
When to implement	(i.e. Year-round but intensified during the rainy season)	...	...
Where to implement	(i.e. Residential areas, high-risk areas, around the village)	...	...
Who should implement	(i.e. Communities, ministry of environment, local government, health workers)	...	...



Responsible body	(i.e. Health office, local government, algaculture office)	...	...
Who should monitor and evaluate	(i.e. Local government, university, health office)	...	...

Source: [WHO \(2012\)](#)

Requirements and resources

After selecting the most appropriate vector control method, an inventory of the financial, human, and technological resources available for vector-borne disease management at the local level should be made. The following shows an example of participation present in vector control programme operation.

- **Stakeholders participation**

Local stakeholders must be involved in the inventory of resources and organisational structures. Possible collaborations and linkages with other local programmes or government services so that actions may be coordinated to maintain uniformity and prevent duplication. Potential stakeholders include district health officers, local government, the private sectors, civil society organisations, the community, and other relevant organisations.

- **Local community participation**

Local capacity-building requirements should also be recognised. Practical short training on vector biology, ecology, and control strategies may increase the involvement of community members, community health professionals, and algaculture extension workers.

The selected vector control method involves a particular set of resources. Indoor residual spraying, for example, necessitates skilled spraying crews working under strict supervision, which frequently needs significant financial and logistical assistance.

Monitoring and evaluation

Two indicators must be determined in monitoring and evaluation systems in vector control programmes: process indicator and outcome indicator. Monitoring and evaluation are required to determine and confirm whether or not the objectives have been fulfilled. During the implementation of a plan, intermediate objectives might provide direction. The aims must align with national vector control goals



C. Summary

- Any vector control plan should be adaptable to changes. As a result, the decision-making process outlined in this part should be repeated frequently, and approaches must be adjusted as needed.
- Operating vector control systems involves determining the local determinants of disease, selecting vector control methods, defining needs and resources, implementing the chosen strategy, and monitoring and evaluation.
- After selecting the most appropriate vector control method, an inventory of the financial, human, and technological resources available for vector-borne disease management at the local level should be made.
- Monitoring and evaluation of the vector control programme are required to determine and confirm whether or not the objectives have been fulfilled.

2.5 Identify key issues and good practices on vector control measures in different types of emergencies

A. Introduction

Each emergency is unique. Therefore, vector control programmes implemented in such contexts will also be different. Identifying key issues and good practices in these programmes is important to avoid mistakes and seize opportunities.

B. Key issues on vector control measures in different types of emergencies

Challenges in vector control programme

[Several challenges](#) can occur in vector control programmes divided into seven large groups: systemic, structural, informational, environmental, movement of humans and goods, political, financial, and ethical.

- **Systemic challenges**
Some countries may have limited public health entomology capacity and poor infrastructure that result in insufficient vector surveillance and



control. Moreover, within the healthcare system, career structures for technical professionals and technicians are either non-existent or inadequate, resulting in high attrition of skilled personnel that can assist in vector control programmes.

- **Structural challenges**

Many nations with endemic vector-borne diseases have disease-specific programmes and policies that do not fully utilise synergies and often compete for resources. While external organisations, such as research institutes hired to perform surveillance or study, are capable, their connections are typically poor, preventing data exchange for decision-making. There may also be a lack of capacity to ensure data and information security.

- **Informational challenges**

Due to a lack of research funding, the evidence basis for vector control programmes to effectively tackle vector-borne diseases may be lacking. Despite pesticide resistance and changes in vector behaviour endangering the efficacy of existing treatments, vector surveillance remains poor in many countries.

- **Environmental challenges**

Vector habitat changes, such as those caused by rapid urbanisation or changes in land use, water management, and farming methods, are frequently unforeseen, uncontrolled, and complicated. Climate change that expands the range of vectors to more temperate climates is also a cause for worry.

- **Movement of humans and goods challenges**

Increased global human population movement, migration for employment, or displacement due to humanitarian crises, as well as increased global trade, is likely to accelerate the introduction of invasive species or exotic pathogens into receptive areas, exposing non-immune populations to new infections and diseases.

- **Political, financial challenges**

Since 2000, substantial funding has been allocated to expand insecticide-treated nets and indoor residual spraying to combat malaria vectors. Other vector control measures and vector-borne diseases, on the other hand, have received less attention, especially in the absence of major outbreaks or high death rates.



- **Ethical challenges**

The use of vector control methods and their execution, including new treatments, raises a number of ethical issues. Countries will need assistance in identifying and addressing ethical concerns and establishing practical ethics advisory bodies when vector control methods are scaled up, and innovative treatments become available.

Opportunities in vector control programme

[Some opportunities](#) that can help maximise the impact of vector control programmes:

- **Development**

Vector-borne pathogen transmission will be reduced through environmentally sustainable and resilient development in metropolitan areas to lower poverty and improve living standards. Furthermore, the SDGs goals to ensure good health and well-being depend on vector control programmes' effectiveness.

- **Recognition**

Existing global and regional vector-borne disease plans demonstrate their relevance in the global health agenda and other sectors, as well as a high-level commitment to their reduction, elimination, and (in certain areas) eradication.

- **Expansion**

Recent vector control achievements, such as against malaria, onchocerciasis, and lymphatic filariasis vectors, have significantly decreased vector-borne diseases. Sustaining and increasing the adoption of established vector control treatments might have more impact.

- **Optimisation**

Re-aligning national programmes to improve vector control against numerous vectors and diseases across geographical areas and human populations can maximise available resources.

- **Collaboration**

Improving timely access to information and resources for the most effective vector-borne disease management would require building on existing cooperation across ministries, sectors, partners, and networks to exchange data and knowledge.



- **Adaptation**

Because social, demographic, and environmental factors strongly impact vector-borne pathogen transmission, flexible vector control delivery, monitoring, and evaluation systems that support locally tailored approaches that can be adapted to specific opportunities or challenges are critical. The local administrative structure should also adapt to increase community participation and mobilisation.

- **Innovation**

Vector control programmes can lead to the development of relevant technologies such as new insecticides, vector traps and baits, and biocontrol.

- **Technology**

Advances in evidence-based vector control, such as real-time data collection or social media, risk stratification, and predictive geoinformatics tools like geographic information systems, remote sensing, and climate models, may be used to improve planning and execution.

C. Good practices on vector control measures in different types of emergencies

Advocacy

[Advocacy](#) efforts assist in promoting the cost-effectiveness and efficiency of chosen vector control programmes methods. To increase acceptance, promoters must empower communities and facilitate collaboration and networking among levels. The target audiences and intended outcomes must also be communicated early in the programme. Associating the benefits of vector control measures with broader developmental concerns like improving health systems and empowering communities might help to increase support. The following steps can help promoters prepare for an advocacy strategy:

- At a national level, form a working group;
- Gather information on the prevalence of specific vector-borne diseases;
- Assess the situation to identify issues with the present vector control system (i.e. lack of evidence-based decision-making), capacity, monitoring and feedback);
- Establish a clear position and the expected results of implementing vector control programme;
- Establish deadlines and objectives;



- Determine who the target audience is;
- Prepare messages and other advocacy materials;
- Develop the necessary skills and experiences for strategic advocacy;
- Make a schedule of activities (e.g. forums, alliance building);
- Assess the strategy's execution and outcomes

The examples of advocacy tools are the following.

1. **Messages**

Messages are the most straightforward tool promoters can use to promote vector control programmes. Promoters can focus on evidence-based decision making behind the programme, the multi-disease approach to be adopted, the integrated vector control interventions to implement, and the communities and partners involved. When implementing the vector control programme, the challenges and opportunities should also be communicated to policy-makers and decision-makers.

2. **Examples from other countries and regions**

Success stories from other countries and regions can help to illustrate the potential benefits of vector control programmes for policy-makers and donors. The examples will show the positive impact of a vector control programme with mixed interventions, interventions against several diseases, environmental management, evidence-based decision-making, collaboration with other sectors, and community participation.

3. **Communicating successful results obtained locally**

Monitoring and data evaluation, which are essential to enhance operations, may also be used for advocacy and show policy-makers and donors about the success and impact of programmes.

Communication and empowerment

In this context, the primary of communication activities is to improve access to vector-borne disease information and services with the larger goal of changing behaviour. People must be “empowered” with the information they receive, not merely made aware of the disease. They need to be motivated to adopt appropriate self-protection and vector control measures when and where needed.



There are various communication methods to improve access to information and facilitate behaviour change. The table below shows three methods for behavioural change and social mobilisation - retrieved from [WHO \(2012\)](#).

Table 22: Communication methods

Attribute	Information, education, and communication	Communication for behavioural impact	Farmer field schools
Methods	Needs assessment, a strategy, use of mass media, group communication, interpersonal communication	Analysis of problems, the definition of behavioural objectives, strategy with the optimal mixture of activities, implementation, monitoring achievement's	Weekly group session for observation and analysis of local ecosystems, decision-making and experimentation, group exercise
Settings	Those requiring messages with general applicability	Those requiring messages with general applicability	Complex setting requiring locally adapted solutions
Strengths	Relatively low cost, rapid coverage, increases awareness	Focus on outcomes, impact on behaviour and mobilisation	Empowering, local adaption, group-building, possible intersectoral cooperation
Weaknesses	Limited effect on behaviour	Cost, human resources	Cost, human resources

Source: [WHO \(2012\)](#)

Capacity building

[Capacity building](#) is a significant challenge in vector control programmes. Many of the current approaches largely rely on the knowledge and skills of those in positions of power in government. Promoters can help facilitate capacity building by considering the following:

- **Learning environment**

The vector control measures should create a supportive learning environment since the whole process is a problem-solving process in which analysis and decision-making are essential, and involvement is essential.



- **Core functions and required competence**
Identify and build competencies of community and local partners in vector control management. Promoters can start by assessing current versus expected competencies to sustain vector control programmes.
- **Curriculum preparation**
In this case, WHO developed a six-module Core framework for training curricula on integrated vector management to assist WHO areas in developing their own regional and national curricula on vector control programmes.
- **Training and education**
Short courses for as many individuals as possible in districts and villages should be prioritised in training programmes. Following the development of a national curriculum, a cadre of national or provincial trainers can be created to provide in-service training to public health personnel in the health sector and personnel from other relevant public sectors, local governments, and civil society groups.
- **Preparation of infrastructure**
The infrastructure required for the capacity building includes entomology laboratories, insectaries, supplies, equipment, transport and communication technology.
- **Monitoring and evaluation**
The capacity building's progress should be regularly monitored and evaluated to identify further iteration and intervention areas.

D. Summary

- Vector control programme challenges can be divided into seven large groups: systemic, structural, informational, environmental, movement of humans and goods, political, financial, and ethical.
- Several opportunities can help maximise the impact of vector control programmes in the following areas: development, recognition, expansion, optimisation, collaboration, adaptation, innovation, and technology.
- Good practices in vector control measures include those implemented in advocacy, communication and empowerment, and capacity building efforts.

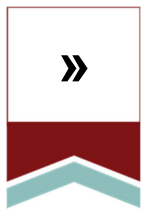




Self-assessment Checklist



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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
<input type="checkbox"/>	Have I read the Learner Guide and understood its contents?
<input type="checkbox"/>	Have I attended, participated in, and completed all training sessions and activities?
<input type="checkbox"/>	Have I reviewed the learning resources to reinforce what I've learned in training?
<input type="checkbox"/>	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?
<input type="checkbox"/>	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



ONE ASEAN
ONE RESPONSE

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Recommended Readings

OXFAM. 1999. *Managing Water Supply and Sanitation in Emergencies*. London. Accessible [here](#).

Hongoh V, Gosselin P, Michel P, Ravel A, Waaub J-P, Campagna C, et al. (2017). *Criteria for the prioritisation of public health interventions for climate-sensitive vector-borne diseases in Quebec*. Accessible [here](#)



Learning Resources

Lacarin, Christophe and Reed, Bob. (1999). *Emergency vector control using chemicals. Leicestershire: Water, Engineering and Development Centre*. Accessible [here](#).





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ASEAN Standards and Certification for Experts in Disaster Management

THE AHA CENTRE

Graha BNPB, 13th Floor | Jl. Pramuka Kav. 38 Jakarta-13120 | INDONESIA

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