

2nd Edition

**LEARNER'S
GUIDE**



TECHNICAL COMPETENCY UNIT



**ADM.TEC
006.2**

Design Strategic Supply Chain
and Logistics Plan



ASCEND

ASEAN Standards and Certification
for Experts in Disaster Management

ASEAN Standards and Certification for Experts in Disaster Management

DESIGN STRATEGIC SUPPLY CHAIN AND LOGISTICS PLAN

ADM.TEC.006.2

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.

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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. 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. However, 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 the certification of disaster management professionals across the 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 with a system 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

Given ASEAN's rapid development and vulnerability to natural hazards, there is a pressing need for 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 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 the 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 Humanitarian Shelter & Settlement. 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.

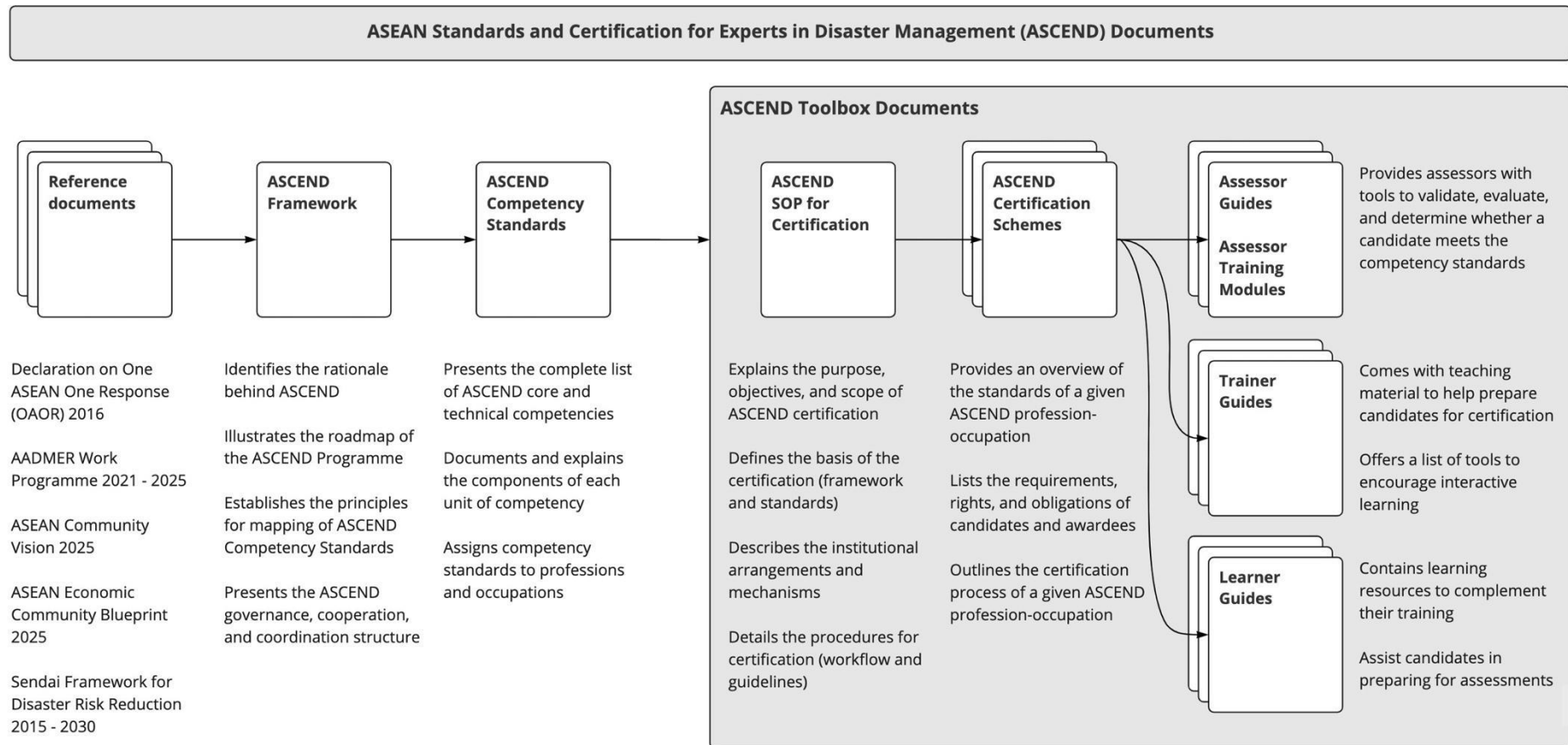
The SOP defines the basis of ASCEND, describes the institutional arrangements and mechanisms, and details the certification procedures. Certification Schemes present an overview of the standards of each profession-occupation and certification requirements, the rights and obligations of candidates and 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 that trainers may use to encourage interactive learning. Learner Guides assist candidates in preparing for ASCEND certification in their chosen disaster management profession and occupation. It contains learning resources and complementary readings that can 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





The Learner Guide: Introduction for Candidates



ASCEND

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

Competency-based learning and assessment

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

Table 1: Competency areas and descriptions

Competency area	Description
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 of evaluating whether a professional is qualified and competent to perform in a particular occupation. CBA is used to determine if the candidate’s experience, knowledge, skills, and attitudes meet the standards and performance criteria defined in a unit of competency.





ASCEND Competency Standards and Unit Descriptor



ASCEND

3.1

Competency standards

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

3.2

ASCEND Competency Standards

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

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



The 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. 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 they reflect changes in the disaster management profession and remain 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: Design Strategic Supply Chain and Logistics Plan

Unit number: ADM.TEC.006.2

Unit description: This unit deals with skills and knowledge required by a logistics manager to comprehensively execute the logistics planning and response process, identify its challenges, and set up logistics response operations

Element 1.

Lead implementation of supply chain strategy and logistical plan

Performance Criteria

- 1.1 Convince key humanitarian actors on the importance and effectiveness of coordinated assessment
- 1.2 Design supply chain setup to meet surging demands
- 1.3 Analyse trends/issues impacting supply chain operations

Element 2.

Establish effective networking with relevant stakeholders

Performance Criteria

- 2.1 Identify logistics stakeholders in emergencies
- 2.2 Analyse logistics data and information
- 2.3 Initiate sharing information mechanism with other actors

Element 3.

Implement humanitarian response

Performance Criteria

- 3.1 Initiate/Lead emergency logistics rapid assessment
- 3.2 Produce logistics concept of operation
- 3.3 Ensure logistics response plan is implemented



3.4

Glossary of Terms and List of Abbreviations

Abbreviations	Descriptions
AADMER	ASEAN Agreement on Disaster Management and Emergency Response
ACDM	ASEAN Committee on Disaster Management
AGP	ASEAN Guiding Principles
AMS	ASEAN Member States
AQRF	ASEAN Qualifications Reference Framework
ASCEND	ASEAN Standards and Certification for Experts in Disaster Management
CBA	Competency-Based Assessment
CONOPS	Concept of Operations
HLIS	Humanitarian Logistics Information System
IASC	Inter-Agency Standing Committee
ICRC	International Committee of the Red Cross
ICS	Incident Command System
KML	Keyhole Mark-up Language
LPI	Logistic Performance Index
MRA	Mutual Recognition Arrangement
NGOs	Non-Governmental Organisations
OAOR	One ASEAN One Response
PDF	Portable Data Formats



SOP Standards Operating Procedure

UN United Nations

WASH Water, Sanitation and Hygiene





Unit Readings and Activities



ONE ASEAN
ONE RESPONSE

ASCEND

4.1

Element 1. Lead implementation of supply chain strategy and logistical plan

1.1 Convince key humanitarian actors on the importance and effectiveness of coordinated assessment.

A. Introduction

Emergency operations in low and middle-income countries often involve more than just local or domestic stakeholders. There are often other international players involved in delivering assistance to survivors. Since only a few organisations can deliver assistance adequately on their own, there is a need to coordinate and collaborate with other entities to efficiently achieve this objective. Organisations operating in this environment include:

- National and local governments.
- United Nations agencies.
- The Red Cross and Red Crescent Movement.
- National and international non-governmental organisations (NGO).
- Commercial companies.
- Military forces.
- Donor agencies.

B. Key actions for coordinating assessment

The main actors during the humanitarian response are:

- Local disaster management office
- National disaster management authorities
- Local red-cross
- Local NGOs

In low and middle-income countries, including many parts of ASEAN Member States, actors can include the following parties:

- Humanitarian coordinators and humanitarian country teams.



- Cluster/sector coordinators, OCHA and country-level inter-cluster coordination mechanisms.
- Cluster/Sector members, including humanitarian logistics.

When undertaking coordinated assessments, whether harmonised or joint, the key actions listed below should be promoted.

C. Purpose and importance of coordinated assessment

Note: The concept and practice of coordinated assessment can be read from the more comprehensive Learner's Guides:

- ADM.TEC.001.2: Lead and manage coordinated assessment
- ADM.TEC.002.2: Lead coordinated assessment preparation

After disasters, various actors often conduct need assessments for their own organisational interests. Governments often use their assessment framework. They might consult traditional agencies from the relevant jurisdictions. Nongovernmental organisations also conduct needs assessments that are informed by their approaches and procedures.

Coordinated assessment is often a multi-sectoral and multi-stakeholder process of collating, collecting, analysing and interpreting data undertaken during the initial stages of an emergency (days and weeks of a disaster) to assess needs and inform decisions on response needs and action. Its goal is to have a shared understanding of the humanitarian impact and key priorities for response.

While it is not simply sectoral in nature, a coordinated approach to supply chain and logistics assessment can help resolve several recurring issues during emergencies. For instance, the challenge lies not so much in the lack of assessment information but in the insufficient capacity to validate and analyse the necessary information to determine priorities and guide the planning of the emergency response, including in terms of emergency logistics. Additionally, certain populations or situations may be over-assessed while others are not assessed at all. Assessment data is often inadequately shared or utilised, and data sets from different assessments are frequently incomparable. Furthermore, there is insufficient time to



aggregate data from multiple assessments, information needs are not sufficiently prioritised, and data collection processes are cumbersome.

In particular, coordinating assessments is crucial for ensuring robust inter-sectoral need analysis during a crisis, leading to improved decision-making and planning.

By coordinating assessments, organisations can

- promote a shared vision of needs and priorities;
- establish an understanding of priority needs from an integrated perspective;
- increase coverage;
- use resources more efficiently;
- better guide donor funding;
- obtain a more comprehensive picture of needs;
- allow clusters and agencies to analyse and decide on the most appropriate strategies and to support affected countries;
- serve as a foundation for planning;
- reduce duplication of effort;
- promote inter-agency learning;
- minimise beneficiary "assessment fatigue";
- identify gaps with greater precision;
- support shared monitoring processes;
- ensure consistency between and within clusters/sectors;
- support country-level assessment preparedness;
- encourage coordination during the response.

Some of the essential questions when initiating a coordinated assessment planning are:

- Is there an established general coordination mechanism (owned by the host government)?
- Is there an established specific (e.g. cluster-based) coordination mechanism (owned by the host government or other stakeholder)?
- Does the host government have an emergency operation centre (EOC) that is functional for a coordinated assessment of the supply chain, market, and infrastructure after a disaster?

The list can go on to cover formal and formal mechanisms for a joint assessment.



1.2 Design supply chain setup to meet surging demands

A. Introduction

A comprehensive approach to humanitarian supply chain setup involves, among others, demand forecasting and supplier assessment, including stockpiling, partnerships, and resource allocation.

B. Demand forecasting

In order to mitigate surging humanitarian demand after a disaster, logistic demand needs to be forecasted for short and long timeframes.

Demand forecasting is a strategy used in logistic studies to perform simple tasks, but in disasters, it can become more complex when managing many different products and/or when multiple stakeholders have differing demands to be met in a very short period of time.

In a pre-disaster setting, a good forecast can be achieved by reviewing historical orders and consumption patterns. Consumption data is normally arranged in discrete time slots. Different time slots can be used depending on the frequency of outbound movements from the inventory: years, quarters, months, weeks, and days. Though the time period granularity has to be defined according to the context, “monthly consumption” is the most commonly used. A monthly consumption is the quantity of a particular item leaving the warehouse per month.

In disaster and post-disaster contexts, a coordinated rapid emergency assessment will record and document multisector needs, including food, nutrition, water and sanitation, shelter, health, and other needs. These multisector demands will change from time to time. Good practice from international organisations offers a framework that recommends four distinct phases or stages of emergency assessment where demands can change as survivors and responders transition from one phase to the next:

- Initial assessment (Phase 1) – to be immediately conducted in the first 72 hours.



- Rapid assessment (Phase 2) – to be executed within the first and second week
- In-depth assessment (Phase 3) - to be carried out during the third and fourth week.
- In-depth assessment (Phase 4) – to inform longer-term response, including recovery, needs to be conducted in the fifth week onwards.

1.3 Analyse trends/issues impacting supply chain operations

A. Introduction

There are potential challenges to humanitarian supply chains in the future. In this Guide, we offer a few challenges:

- Climate change risk
- Greater push for sustainability and green logistics
- Artificial intelligence
- Good humanitarian governance

B. Climate Change and Disaster Response

Climate change leads to more frequent and severe natural hazards like hurricanes, floods, and wildfires, which can trigger more disasters and/or interact with other types of hazards and residual risks and disrupt supply chains by damaging infrastructure and delaying transportation. Humanitarian actors must invest in resilience planning, including building scenarios for diversifying suppliers and creating contingency plans to mitigate these disruptions pre and post-disasters.

C. Green Humanitarian Logistics

Green humanitarian supply chain and logistics is an approach that integrates environmental sustainability into disaster and humanitarian emergency logistics. It focuses on minimising the environmental impact of aid delivery while ensuring efficient and effective assistance to those in need.

Some key aspects and trends in green humanitarian logistics are the demand for sustainable transport systems in humanitarian settings,



the use of renewable energy across humanitarian logistical systems, waste reduction, and green procurement (e.g. sourcing from suppliers that adhere to sustainable practices and environmental standards. Eco-Friendly Products: Prioritizing the procurement of eco-friendly products and materials for aid distribution).

D. Adoption of New Technology

There has been a lot of buzz around new technologies such as the Internet of Things (IoT), AI, and autonomous vehicles.

With increased uncertainty, supply chain leaders need effective collaboration to be resilient and responsive. Poor data management and governance also present a foundational issue to supply chains. Having clean, well-managed data is critical to the success of systems across the organisation. Having inaccurate data can affect a company's ability to use analytics effectively, automate activities, and more.

E. Good humanitarian governance

Corruption and fraud in the humanitarian industry and emergency management sector are significant issues that undermine the effectiveness of aid, erode trust, and exacerbate the suffering of vulnerable populations.

There is a need for a stronger commitment to establish a good governance system in place to minimise potential procurement fraud (e.g. manipulation of procurement processes to favour certain suppliers, often in exchange for kickbacks or bribes) must be eliminated.

Addressing corruption in the humanitarian supply chain and logistics is critical for ensuring that aid reaches those who need it most. By implementing robust governance, enhancing transparency, leveraging technology, and engaging communities, humanitarian organisations can mitigate the risks of corruption and improve the effectiveness and integrity of their operations.



4.2

Element 2. Establish effective networking with relevant stakeholders

2.1. Identify logistics stakeholders in emergencies

A. Introduction

An emergency may evolve unpredictably. The quality of an emergency response depends on several factors, such as information available, decision-making processes, and collaborations between actors.

Timely decision-making and responses are crucial. Delays in decision-making and response inefficiencies can affect peoples' lives, worsen suffering, and cause further material damage - burdening society with huge costs.

Humanitarian emergency operations are complex operations that involve numerous organisations, individuals, systems, techniques, and methods. Decisions and responses in such an emergency require the effective coordination of multiple stakeholders from different sectors and disciplines.

As social systems become increasingly connected to physical and technical systems, the range of possible interactions among individuals, groups, and organisations also increases. The number of factors that potentially can influence decisions and actions also grows.

This interconnectedness between the different elements of these systems could lead to cascading consequences. Disrupting one system component (e.g., an infrastructure) can affect other elements and create compounding effects in the entire system. The extent of these effects and the gravity of their impact depend on how tightly coupled the components of the system are, how strong the original cause is, and whether or not adequate countermeasures are in place.

Making decisions and implementing actions in this highly complex and dynamic environment often exceeds the capacity of a single actor. No single entity can completely control the various multi-scale and interactive networks in real time. Traditional emergency management approaches



that rely on rigid institutional structures, centralistic management, top-heavy decision-making models, and protocol-driven actions are no longer sufficient.

Various individuals, groups, organisations, and jurisdictions need to align their decisions and coordinate their actions to conduct effective emergency response operations.

B. Horizontal and vertical coordination

Coordination is often referred to using two categories: horizontal and vertical coordination.

Horizontal coordination involves internal relationships, partnerships inside an organisation or a community, or collaboration with competitors and non-competitors. There are three types of horizontal coordination, depending on the level of integration:

- **Type 1**

Partners coordinate on a single or limited task over a short-term period. In a humanitarian crisis, Type 1 coordination among humanitarian organisations includes sharing information about the disaster situation, the affected population, or the availability of resources. In addition, humanitarian organisations coordinating with Type 1 initiatives jointly develop and pursue immediate solutions for common problems.

- **Type 2**

Partners jointly execute several tasks, or several departments of organisations work together over a medium-term period. Type 2 coordination in a humanitarian crisis context often focuses on joint planning, joint analysis, or joint identification of critical issues (e.g., locations of supply chain disruptions or bottlenecks). The purpose of Type 2 coordination is to close gaps, avoid unnecessary duplication of efforts, efficiently use available resources, and evaluate performance.

- **Type 3**

Also known as a strategic alliance. The organisations combine or integrate their operations to a significant degree. Partners focus on building long-term relationships and consider others as their extensions. This type of coordination involves long-term joint planning



and more integrated supply chain processes across functions and organisations. Arranging a formal contract among partners becomes necessary as the level of integration increases. There are emerging initiatives for applying type III coordination in the global humanitarian context, such as the Sphere Project.

Vertical coordination refers to the connections between two or more organisations that share their responsibilities, resources, and performance information to serve relatively similar beneficiaries. Power distribution, trust, planning difficulty, and communication are among the factors that may influence vertical coordination.

Vertical coordination occurs in upstream or downstream activities. An example of this would be the coordination between national or local authorities, including state organisations, local civil society, and other relevant organisations like NGOs and private logistics providers. This kind of coordination ensures that humanitarian responses build on existing capacities at different levels of governance and facilitate information exchanges between them.

C. Obstacles and challenges of humanitarian logistics coordination

There has been considerable effort to enhance the logistical coordination between stakeholders in humanitarian aid and disaster relief. Some efforts are more successful than others. There are still unrealised benefits and a need for further improvement in coordination.

- **Large number and diversity of participants**

A range of actors participate in disaster response - governments and inter-governmental organisations, including UN agencies, NGOs, commercial partners, local civil society associations, and communities. Some small NGOs form only after the disaster occurs. These actors widely differ in their organisational structures, operational policies, missions, and logistical capacities. These differences contribute, to varying degrees, to making humanitarian coordination challenging, especially when roles and responsibilities are not clearly defined.



- **The urgency of humanitarian relief response and limited time to establish coordination**

It is difficult to get accurate and timely information for relief operations in a chaotic environment following a disaster. Consequently, disaster responders must make complex strategic and operational decisions amid data uncertainty because delays in response can add to unnecessary suffering and damage.

- **Limited information sharing and communication**

Accurate and current information about the disaster-affected area, including damages and needs assessment, is essential to emergency relief efforts and logistical coordination. Unfortunately, the chaotic nature of a disaster makes information sharing a challenging task. Shortly after a disaster strikes, key stakeholders such as local governments might not have a comprehensive picture of the impacts and needs.

Without information about the specific needs and available resources, coordination between relief organisations becomes a significant challenge. The logistical system may clog up with less important commodities, preventing critical items from reaching the affected area. For instance, some responders might transport the supplies they believe to be the most important for the relief operation without considering supplies delivered by other organisations.

- **Allocation of costs, benefits and risks**

Due to the non-profit nature of humanitarian work, the mechanisms and tools used by the commercial sector to facilitate logistical coordination, such as no-show penalty fees and overbooking, cannot be directly implemented in humanitarian logistics. The absence of formal agreements and standard contracts customised to humanitarian relief operations creates many challenges. For instance, relief organisations have to reach agreements on allocating costs, benefits, and risks of humanitarian logistics. The lack of a good resource-sharing mechanism is a significant obstacle that impedes humanitarian logistics coordination.



- **Limited personnel dedicated to logistics and coordination**

Smaller responding organisations with limited human resources face greater challenges in coordination because they lack the available staff to facilitate exchanges with other responding organisations. For example, to facilitate coordination between responding organisations, the leading organisation (often a UN agency) organises weekly inter-agency meetings to share updated information, establish agreements between agencies, and divide relief tasks. However, smaller local NGOs cannot regularly allocate their personnel to attend such meetings.

D. Actors in emergency response

[This is a brief repetition from Module ADM.TEC.009, Element 1.B]

- **Internal actors**

- **Headquarters**

In centralised supply chains, power can be concentrated in the headquarters of humanitarian organisations. Stakeholders in headquarters are the main line of contact with donors and other funders. They also usually decide how to allocate the funds needed for humanitarian logistics. Although they are far away from the realities in the field, they also have legitimate and urgent claims, making them important stakeholders.

- **Internal organisation at the country / provincial level**

As part of a larger humanitarian operation, the logistics function depends on other departments/units such as programs, finance, administration, and more. The decisions or directions these departments/units give will shape the conduct of logistics operations.

- **External actors**

- **Beneficiaries / Communities**

At-risk groups and the affected community members are key stakeholders in disaster management. The ultimate goal of all humanitarian operations is to save lives and fulfil the needs of survivors while maintaining their dignity.



- **Donors (foreign government, individuals, foundations, UN agencies, and private sector companies)**

Many responders come from not-for-profit organisations. Their operations largely depend on the availability of funds or goods provided by donors. Therefore, donors play an important role in logistical operations as support for humanitarian operations because they can determine the direction of such operations.

- **Government agencies**

The government holds considerable power when it has control of political and economic conditions that influence supply chain processes and decisions around them, such as the customs clearance process for humanitarian relief goods that will enter from overseas. In addition, coordination with the government is needed to minimise gaps and overlaps in implementing humanitarian activities. Governments are still the primary implementers of every humanitarian operation. The task of other stakeholders is to support these activities.

- **Military**

Civilian actors are usually the ones primarily responsible for disaster response. However, militaries are often tapped because they have the personnel, equipment, training, and organisational resources that can be mobilised to support relief efforts in the aftermath of large-scale disasters. Therefore, militaries are also major stakeholders with which humanitarian actors need to engage. They get involved especially in logistical operations that require strategic assets and resources, such as delivering goods to inaccessible areas using helicopters, building emergency bridges to reach isolated locations, etc.

- **Other NGOs and UN agencies**

Different NGOs and UN Agencies need to coordinate humanitarian logistics to prevent gaps and overlaps in implementing their activities. Information exchange about logistical needs (vendors, infrastructure, etc.) enables resource exchange, such as borrowing warehouse space and vehicles near or in the area of operations.



- **Logistics providers and private vendors**

The various private business organisations that supply goods and services are key stakeholders in logistics operations.

E. Summary

- An emergency may evolve unpredictably over time. Responses are dependent on several factors (e.g., data-gathering requirements, quality of information, decision-making processes, and collaboration between actors).
- Emergency operations are complex operations that involve numerous organisations, individuals, systems, techniques, and methods. Decisions and responses in an emergency require the effective coordination of multiple stakeholders from different sectors and disciplines.
- Horizontal coordination involves the internal relationship, the partnership inside an organisation or a community, or collaboration with competitors and non-competitors.
- Vertical coordination refers to the connections between two or more organisations that share their responsibilities, resources, and performance information to serve relatively similar beneficiaries—power distribution, trust, planning difficulty, and communication influence vertical coordination.

2.2. Analyse logistics data and information

A. Introduction

The information generated from assessments – and throughout the monitoring, reviewing, and evaluating projects and activities – is used to make various decisions like where to conduct humanitarian action, whom to assist, what type of activities to undertake and when, etc. Such information can also be the basis for modifying existing projects and activities and recommendations for the future. Methods for acquiring and analysing data must be reliable and efficient. Good information is the basis for making evidence-based and sound decisions.

B. Measures

Information about a disaster is often shared on the internet through social media like Facebook, Twitter, humanitarian websites and mailing lists.



However, online information about a disaster varies widely. It depends on the type of hazards (e.g., the path and time of a typhoon's landfall are more predictable than pinpointing the exact location and timing of earthquakes), the availability of information technology, and the level of involvement of national and local governments.

Data quality measures depend on the user's purpose (e.g., research, situational awareness, operational decision-making). A critical attribute for analysis is that the data format reflects the user's purpose and what type of humanitarian logistics modelling they need. Commonly used file formats are keyhole markup language (KML), Microsoft Word Documents (.doc), and portable data formats (PDF).

PURPOSE (Data Format)	RELEVANCE	<ul style="list-style-type: none"> • Logistical content • Logistics performance index • Primary purpose • Outlet type
	TIMELINESS	<ul style="list-style-type: none"> • Update type • Update frequency • Update timeline • Retention time
	GENERALIZABILITY	<ul style="list-style-type: none"> • Local/Natl. VS. Global/Intl. • Disaster properties • Local factors
	ACCURACY	<ul style="list-style-type: none"> • Establishment type • Coordination level • Completeness

- **Relevance**

Relevance is determined by whether the data meets its users' current and future needs and logistical modelling requirements.

- **Logistical content**

Humanitarian and relief organisations constantly collect, process, and disseminate immense amounts of information in a broad range of settings and applications. Below are specific types of information relevant to humanitarian logistics.



- **Demand:** Identifying the location, quantity, and types of supplies needed in the disaster-affected area can enable more effective relief efforts. Demand in these settings refers to the required physical goods, such as food, medication or shelter, and services like medical assistance, rescue missions, and telecommunication support.
- **Supply:** Information about pre-existing relief equipment, supplies, and workers available after a disaster, such as vehicles, food packs, and search and rescue teams, are important pieces of information needed to conduct efficient relief efforts.

- **Infrastructure:** To facilitate the distribution of supplies according to the demand, understanding the state of infrastructure (e.g., roads, airports, seaports and their post-disaster conditions) is needed first. Accurate and timely data from the field can help logistical planners gain insights into the situation.

- **Logistical Performance Index (LPI)**

The World Bank Logistics Performance Index (LPI) measures the "friendliness" of a country based on six factors: customs, infrastructure, service quality, timeliness, international shipments and tracking/tracing. Logistics Performance Index is one of the four factors impacting logistical preparation and response. LPI indicates the relevance of a given data for logistical modelling and is related to local factors under "Generalizability".

- **Primary purpose**

Primary purpose refers to the focus of the information posted in the outlet or the organisation's role in providing the information, like assessments and maps. Data relevance depends on whether there is a close alignment between the data source and the goals of logistics modellers.

- **Outlet type**

There are usually two types of information outlets relevant to humanitarian logistics: primary and aggregator information outlets. Primary information outlets are the organisational websites that provide data and information collected and analysed by that organisation. Aggregator information outlets are online sources of



organisations that disseminate information collected and analysed by primary information outlets.

- **Timeliness**

Timeliness is generally considered the most important characteristic of data by humanitarian responders. Humanitarian data must also be kept up to date. Timeliness is the gap between when the data is collected and when information becomes available and accessible.

- **Update type (new update/incremental VS overwrite)**

Data update type refers to the method by which the status updates are provided after the initial file upload. "Incremental updates" indicate that the new information described is in a new file. "Overwrite updates" indicate that additional information is being appended to the existing file containing the original information.

- **Update frequency**

Due to the nature of humanitarian operations and the impact of time on the output, the humanitarian community benefits from timely and frequently updated data. Update frequency refers to the regularity with which data is updated. Update frequency can be a minute, hour, day, or other scale.

- **Update timeline and retention time**

While data "update timelines" and "retention times" are associated with the timeliness of data, they are quite different. "Update timelines" refer to the lapse between the initial time the data are uploaded and the last time data are uploaded. "Retention times" refer to when data will be made available for public use. For example, it may mean how long a given data set will stay on the website.

- **Generalizability**

Generalisability indicates how applicable the information drawn from the data is to a particular disaster or other disaster. The information is used for humanitarian logistics preparedness, analysis, lessons learned, and evaluation.



- **Local/National vs Global/International**

Refers to the source of information and whether it is administered by an international organisation or a local government/organisation where the disaster occurred. It signifies the level of involvement of local governments or organisations in disaster response operations.

- **Disaster properties**

As the name suggests, this attribute describes the main characteristics of a disaster. Examples include fast or slow-onset disasters), the intensity of a disaster, the scale and magnitude of its impact, and more.

- **Local factors**

This measure is similar to the LPI. It indicates the local characteristics of the area where the disaster struck. LPI focuses on factors that impact logistical performance, such as infrastructure. It considers broader socio-political, political, security, and environmental (built and natural) factors interacting with disaster risk, vulnerabilities, and capacities of local populations. However, local factors refer to metrics related to the local environment.

- **Accuracy**

According to the Humanitarian Data Exchange Quality Assurance Framework, the accuracy of the data is defined as “the degree to which the information correctly describes the phenomenon it was designed to measure”. Accuracy measures how credible and reliable datasets or a piece of the given information is.

- **Establishment type**

Establishment type denotes whether the data presented in an outlet (e.g., website or assessment reports) is about a specific disaster only or refers to multiple disasters.

- **Coordination level**

This attribute refers to the coordination level between different actors in disaster response. It indicates how efficient relief efforts are in addressing gaps and minimising overlaps in multi-stakeholder operations. Coordination may occur horizontally and vertically, within or outside an organisation.



- **Completeness**

Completeness refers to whether there is missing information. Examples of incomplete information might be the absence of reports on the status of certain roads or the damage levels of buildings.

C. Summary

- The information generated from assessments – and throughout the monitoring, reviewing, and evaluating projects and activities – is used to make various decisions like where to conduct humanitarian action, whom to assist, what type of activities to undertake and when, etc. Good information is the basis for making evidence-based and sound decisions.
- The four (4) key measures are relevance, timeliness, generalizability, and accuracy.

2.3. Initiate sharing information mechanisms with other actors

A. Introduction

Humanitarian logistics represents a range of activities within humanitarian organisations that are participating in relief efforts. The bulk of these activities is also a component of a broader humanitarian supply chain - the different interconnected networks involved with physical aid to beneficiaries.

Humanitarian logistics information systems improve information flows, integrate logistics units more efficiently with non-logistics units within humanitarian supply chains, and enable more effective operations and timely feedback to donors.

Humanitarian logistics activities occur across the disaster management continuum. Humanitarian logistics information systems improve logistics activities in each phase and enhance the continuity of humanitarian operations while transitioning to different phases in the disaster management continuum.



Humanitarian logistics involves procuring, storing, and distributing supplies needed to assist beneficiaries. For humanitarian logistics to function smoothly, different actors must coordinate throughout the lifespan of humanitarian operations. This section will explore how humanitarian logistics information systems can improve or open pathways to better coordination between humanitarian organisations.

B. Humanitarian Logistics Information System (HLIS)

Humanitarian Logistics Information Systems (HLIS) facilitate information sharing between humanitarian organisations coordinating logistics operations during a response.

Effective humanitarian information systems provide timely access to comprehensive, relevant, and reliable information critical to humanitarian operations. The HLIS can archive information about the different aspects of a created event/incident. It is a powerful tool for analysing that response state at the tactical, operational, and strategic levels. It can also generate what-if scenarios, statistics, and other reports relevant to future response planning.

A Humanitarian Logistics Information System (HLIS) must operate across the entire disaster management continuum. They must be scalable to manage a large number of suppliers during an emergency response stage and the high diversity of supplies across the recovery and mitigation stages and manage the flow of information from the preparation stages to the response phase.

In the preparation phase, HLIS records what emergency response supplies are available at the onset of the disaster. Trained logisticians use these information systems and simulations to prepare for disaster responses.

HLIS can eliminate the need for duplicate data entry in the response phase and offer more timely and accurate information. HLIS lets organisations know what supplies were distributed and what supplies remain during the transition to the recovery phase. This allows humanitarian logisticians to utilise surplus supplies in recovery activities and better plan for the next disaster response.



Humanitarian logistics information systems can:

- Enhance needs assessments by informing field staff about what supplies are available for beneficiaries in local warehouses, pre-positioned emergency stocks, or local and international markets.
- Share lists of supplies available in local and international markets, including prices and lead times, to assist program staff in planning their procurement activities.
- Inform program staff about procurement activities and the constraints faced by logisticians. Such internal communication can help create trust between teams.
- Provide budget holders with more accurate financial information regarding funds committed to the procurement process. It helps users of funds avoid overspending or underspending on budgets.
- Provide warehouse inventory reports to program staff so they can utilise supplies better.
- Share information on the distribution of supplies to avoid the need for duplicate record-keeping between logistics and program teams.
- Accurately divide logistics overhead costs such as warehouse rental, transportation, and logistics staff wages into program budgets according to the activities that logistics is supporting.

Information systems can help encourage program units to become more active consumers of logistic services. Improving the information flow from humanitarian logistics information systems can contribute to the overall effectiveness of a humanitarian operation.

C. HLIS between organisations

Humanitarian supply chains could be viewed more widely, including the multiple organisations that provide physical aid to beneficiaries in the same region. Humanitarian logistics information systems can enable better information sharing between organisations, enhancing humanitarian operations.

One area in which information systems could improve is local procurement. Procurement is vulnerable to corruption through collusion between organisation staff and vendors and bribes when choosing specific vendors.

An analysis of procurement data can reveal trends and irregularities indicative of corruption, such as consistently purchasing from particular



vendors or certain purchasers who are always receiving higher-than-average quotes. This analysis would be more effective when using procurement data from different humanitarian organisations in the same region because prices can be compared. This enables logisticians to monitor if one organisation pays significantly more for similar items.

Humanitarian organisations often rely on local markets to provide supplies. However, large amounts of purchasing activity can lead to price inflation after a disaster. Analysing purchasing trends from multiple humanitarian organisations and improved information sharing with local vendors can help mitigate this by spreading requirements over multiple vendors and informing them of expected demand. It can also allow humanitarian organisations to support and stimulate local markets sustainably.

There are many coordination challenges between humanitarian organisations. However, using and improving humanitarian logistics information systems can facilitate coordination by creating more incentives to work together and align each other's activities.

D. Summary

- Humanitarian logistics information systems improve information flows, integrate logistics units more efficiently with non-logistics units within humanitarian supply chains, and enable more effective operations and timely feedback to donors.
- Humanitarian logistics activities occur across the disaster management continuum. Humanitarian logistics information systems improve logistics activities in each phase and enhance the continuity of humanitarian operations while transitioning to different phases in the disaster management continuum.
- Information systems can help encourage program units to become more active consumers of logistic services. Improving the information flow from humanitarian logistics information systems can contribute to the overall effectiveness of a humanitarian operation.
- One area in which information systems could improve is local procurement. It can help reveal corruption and bribes in humanitarian logistics. It can also allow humanitarian organisations to support and stimulate local markets sustainably.



4.3

Element 3. Implement humanitarian response

3.1. Initiate/Lead emergency logistics rapid assessment

A. Introduction

There are several challenges when directing a logistics assessment during an emergency:

- Limited time, so initial assessment may not cover all aspects of an emergency at once
- Limited resources, such as staff, staff capacity, funds, equipment, and supplies
- Limited knowledge about the intervention area and the local community

Careful planning is essential to the success of rapid emergency logistics assessments.

B. Planning an assessment

Planning an assessment involves:

- Identifying end users of the assessment information (i.e., donors, program staff, etc.) and their respective needs (i.e., budgets, programming, etc.)
- Setting the objectives of the assessment
- Agreeing on the reporting format and establishing terms of reference for the logistics assessment team
- Selecting team members
- Identifying, preparing, and testing the assessment tools
- Mobilising resources to facilitate the assessment (i.e., camera, vehicle)

Considerations for post-disaster logistics assessments:

- Be sensitive to local culture and customs
- Identify existing local capacities and resources



- Take account of the responsibilities, response, and legal requirements of national and local authorities
- Consider the requirements of different sectors involved and the response of other agencies to avoid duplication
- Define terms of reference and specific information needs. Define the purpose and scope of each assessment mission clearly and specify appropriate report headings.
- If possible, agree on common definitions, methods, and data collection formats so that information from different teams will be comparable
- Coordinate and work with others. Form multi-disciplinary teams with government and other humanitarian organisations whenever possible.
- Select sources of information carefully to ensure that they are reliable and up-to-date
- Use standardised assessment methods and tools
- Consider the accuracy, margin of error, and effect on conclusions drawn from it. Specify ranges rather than absolute figures if data is only approximate. Be sure to highlight any information that may misrepresent a situation.
- Be sensitive to possible biases in people's perceptions and reports (including the assessment team's). Information for emergency assessments must come from different sources to provide a balanced assessment of the situation.
- Be cautious about generalising. The situation and needs may vary considerably over short distances within the affected area and different locations.
- Continuously re-assess findings based on the changing context and needs
- Share information to enable effective coordination and rapid response
- To speed up the assessment, avoid reporting on data or information already available.
- Include a status report on some of the critical factors required to enable a successful response:
 - Financial resources available and any restrictions or provisions pegged to it
 - Staffing, numbers of those involved and their skills
 - The extent of coordination with other stakeholders also conducting assessments



- Nature of the emergency, whether a slow onset, rapid onset or complex emergency. This determines the assessment type and speed of the response.

C. Orientation process

Some organisations require an orientation process for personnel before deployment and conduct a rapid assessment process. The orientation process usually includes:

- **Purpose:** The purpose of this orientation is to:
 - Introduce personnel to assessment concepts, plans, and procedures
 - Help personnel recall assessment concepts, plans, and procedures
 - Update personnel on changes to assessment plans and procedures
- **Contents:** The orientation must include:
 - Rapid assessment concept of operations
 - Rapid assessment roles and responsibilities
 - The location of the affected area and community profile
 - Risk assessment approaches, methods, and tools
 - Activation procedures, such as call-up procedures, agency deployment/unit assignments, interagency coordination, communication protocols, data recording/reporting, and data management/recordkeeping
 - When and how to request additional resources
 - Step-down procedures
- **Personnel involved:** Who needs to attend and participate in the orientation
- **Allotted time for orientation and delivery method**

D. Initiate Emergency Logistics Rapid Assessment

As soon as a team is deployed onsite, an emergency logistics rapid assessment must be carried out immediately. The assessment involves verifying the information obtained before departure and getting an immediate picture of the current condition. The goal is to collect data and valuable information for the decision-making and planning of response operations.



- **Initiating an assessment**

It is important to make these preparations before sending out the field team:

- **Analyse existing data:** Rapidly collate and analyse available information. For example, existing knowledge can be used to anticipate the likely effects on food security and determine areas where data collection should focus.
- **Prioritise the areas to be visited:** Decide where the field team can get a good overview of the situation and gather information about the most urgent needs.
- **Coordinate and work with others:** Form multi-disciplinary teams with government, UN agencies and NGO partners whenever possible. Coordinate efforts to get information from as many localities as quickly as possible.
- **Define terms of reference and specific information needs:** Define the purpose and scope of each mission clearly, and specify the required contents of a report.
- **Decide on the methods and data collection formats to use for large-scale assessments.** If possible, agree on common methods and formats so that information from different teams will be comparable.
- **Ensure that transport and other practical arrangements necessary for field survey operations are available and accessible.**

When information is already available on a specific aspect of the emergency, the assessment will not need to report on that aspect.

- **Basic principles to keep in mind**

- **Use multiple sources and methods whenever possible.**
 - Use both secondary data (existing reports) and primary data (new information specifically gathered for the assessment)
 - Use both qualitative and quantitative methods
 - Compare (triangulate) information from different sources to get a complete and more balanced picture of the situation
- **Seek participation and consensus:** Involve people from other groups in the community in the assessment process. Seek to build consensus at the onset. Without such consensus, it will be difficult to effectively target the neediest households or facilitate a smooth transition to recovery and self-reliance.



- Whose (short- and long-term) survival is most at risk
- The objectives for any assistance, the targeting/selection criteria to be adopted, and the procedures to be used
- How and when will assistance be phased out?
- **Be transparent and provide feedback:** Ensure that community leaders, local officials, and other concerned stakeholders understand the data-collection process and the basis for the conclusions.
- **Share tentative conclusions with these groups:** Keep them informed about the allocation of assistance.
- **Record source(s) of information** and the particular areas or groups to which different information relates.
- **Copy any important information from documents found in the field:** Do not take the original copies away from their owners.

E. Summary

- When directing a rapid emergency assessment, humanitarian logisticians face limited time, resources, and knowledge. Careful planning is essential to the success of rapid emergency logistics assessments.
- Some organisations require an orientation process for personnel before deployment and conduct a rapid assessment process. The orientation should focus on: (i) communicating the purpose and objectives of the assessments, (ii) the concepts, plans, procedures, methods, and tools, (iii) target sites, and (iv) personnel involved and roles and responsibilities.

3.2. Produce a logistics concept for operation

A. Introduction

The Concept of Operations (CONOPS) explains, in very broad terms, the strategy and process involved in preparing, responding, recovering, and mitigating the impacts of hazards that humanitarian organisations can respond to.

In developing its strategy, the organisation has to analyse potential threats and the operations resulting from them. Each operation is further analysed to identify the vital functions needed in a joint response. From



this analysis, functional annexes are identified, and the processes of how each function is performed are described.

Key units, departments, and divisions with staff with the knowledge and skills necessary to perform these functions are assigned primary or supporting roles in emergency operations. The CONOPS section will describe how these functions are applied and what activities enhance operational capability during each phase of emergency management.

B. Logistics Concept of Operation

The humanitarian logistics concept of operation helps organisations determine the logistics operation structure and processes that fit the context of the situation. Every logistical operation, especially in disaster response, is a "tailor-made" operation because each event is unique. However, some things remain constant, like emergency purchasing protocols or warehouse documentation systems.

Concept of operations assists in:

- Improving coordination by building a more targeted and structured exchange of information
- Helping various actors to agree on a specific setup
- Outlining frameworks, roles, responsibilities, and procedures
- Making the best use of available logistics assets by matching them to the scale of an emergency and the scope of the required logistical services of a response.

Humanitarian logistics is central to all mobilisation activities because it bridges disaster preparedness and response, procurement and distribution, headquarters and the field. An exemplary operation concept helps humanitarian logistics fulfil its "bridging" purpose by preventing waste, avoiding redundancy, focusing efforts where it matters, and minimising the overall operational duration and costs. The 4W + 1H approach (who, what, where, when and how) is useful in this case.



C. Scope of the Humanitarian Logistics Concept of Operation

- **Brief context summary**

Refers to a report describing the disaster, its impact, and the current situation. It usually includes maps and photographs of the affected areas, data on affected populations, infrastructure damage, and a list of urgent needs. This information is often obtained from a rapid logistics assessment or third parties such as media, government briefs, etc.

- **Identification of gaps and bottlenecks**

On top of the list of urgent needs, information about where intervention gaps are and areas with bottlenecks are also critical. These bottlenecks include damages to airport runways that can hinder the process of sending relief from other regions, damages to telecommunications systems in affected areas, etc. This information will then become the organisation's justification for operating in the affected area.

- **Planning assumptions and risk factors**

This section describes possible interventions based on available information, considering the risks of the operation. Supporting documents such as risk analysis are important.

- **Organisational asset information**

Describes all the available assets of an organisation that can be quickly used to support this operation. Asset information can be in the form of information on staff or specialists, available vehicles, warehouses near affected areas, and emergency supplies, among others.

- **Coordination mechanisms**

This section includes coordination between stakeholders in affected areas, such as logistics clusters, local governments, and customs offices. It also describes how coordination occurs within an organisation, such as reporting structures within teams and departments/units.

- **Roles and responsibilities of actors involved**

This section details the duties and responsibilities of personnel involved in response operations and the chain of command. Several organisations already have an SOP describing the functions and



hierarchies during emergency response. A chain of command can streamline the organisation's information flow and prevent micro-managing cases that may interfere with team activities.

The concept of operation framework can be prepared before response operations as part of an organisation's mitigation plan. When agreed upon by stakeholders, the framework can be combined with other documents such as Rapid Assessment Report, Logistics Capacity Assessment, Risk Analysis, ICS, Emergency Protocol, etc. The operation concept is a living document that will become the basis for developing a funding proposal, operation plan, and more.

D. Scope of the Logistics Concept of Operation

The Logistics Concept of Operation describes the aspects that will be part of emergency response until a detailed operation plan is produced.

- **Emergency logistics assessment**

An emergency logistics assessment is the process of gathering, analysing, and disseminating logistics-related data and information needed for responding to a disaster. It determines the extent of the impact (through a situational assessment) and the logistical needs (through a capacity assessment). Assessments are continuous efforts that adapt to the changes in responses or interventions.

- **Risk management**

Emergency response operations occur in unpredictable and unstable situations where people face profound risks from natural hazards, armed conflict, political violence, and human rights abuse. Risks shape when what and how humanitarian actions and interventions are conducted.

Effective risk management is based on accurate assessments of contextual risks and good situational awareness. However, humanitarian action occurs in complex and dynamic environments that make it difficult to pinpoint the nature of dangers and threats. The need for immediate assistance makes detailed, resource-intensive situation analysis neither possible nor a priority.

At the global level, the Inter-Agency Standing Committee (IASC) Early Warning – Early Action process offers a platform for collectively identifying and assessing contextual risks in different geographic



regions. However, this is not usually replicated at the field level, where risk assessment and management are critical.

- **Security plan**

Security plans and their measures have three objectives. They are meant to eliminate or at least reduce security risks. Some examples are adding access control to buildings, avoiding certain areas, suspending convoys on certain routes, or not storing goods and assets in a particular place. Secondly, they intend to limit the negative impact of incidents by implementing protective measures, such as setting up underground shelters. Finally, security measures must limit the adverse effects of security incidents, for example, by making arrangements for rapid evacuation.

- **Humanitarian Logistics Information System (HLIS)**

HLIS facilitate information sharing between humanitarian organisations coordinating logistics operations during a response. Effective humanitarian information systems provide timely access to comprehensive, relevant, and reliable information critical to humanitarian operations. HLIS can archive information about the different aspects of a created event/incident. It is a powerful tool for analysing that state of response at the tactical, operational, and strategic levels. It can also generate what-if scenarios, statistics, and other reports relevant to future response planning.

HLIS must be able to operate across the entire disaster management continuum. They must be scalable to manage a large number of suppliers during the response phase, the high diversity of supplies across the recovery and mitigation phases, and the flow of information from the preparation phase to the response phase.

- **Coordination mechanism**

An emergency may evolve unpredictably over time. Responses are dependent on several factors (e.g., data-gathering requirements, quality of information, decision-making processes, and collaboration between actors).

Timely decision-making and responses are crucial. Delays in decision-making and response inefficiencies can affect peoples' lives, worsen suffering, and cause further material damage - leaving society burdened with huge costs.



Emergency operations are complex operations that involve numerous organisations, individuals, systems, techniques, and methods. Decisions and responses in an emergency require the effective coordination of multiple stakeholders from different sectors and disciplines. Defined and clear descriptions of roles and responsibilities, communication protocols and reporting structures help facilitate coordination.

- **Operation plan**

An exemplary operation plan must be able to answer the following questions:

- Which tasks must be carried out? What are the correct sequences for carrying them out? How do they relate to other activities?
- Who will be responsible for performing such tasks? (Rather than individuals, what must be identified here are teams, departments, units, or organisations)
- Who will be in charge of the overall coordination of the logistical system?
- What resources are needed? When, where, and how can they be procured?
- What alternative actions can be implemented if the logistical system is somehow disrupted?

This operation plan can be a:

- Short-term plan is conducted a few days after a crisis or in the early stages of response to a sudden major disaster.
- Long-term plan conducted over several months or in response to a slow-onset crisis.

Some aspects need to be defined/agreed upon in collaboration with the government and/or other partners; others are internal within the organisation's country office and sub-offices.

Operation plans are subject to change and must be reviewed regularly, especially in dynamic operating environments like responses to large-scale disasters and complex emergencies.



E. Summary

- The Concept of Operations (CONOPS) explains, in very broad terms, the strategy and process involved in preparing, responding, recovering, and mitigating the impacts of hazards that humanitarian organisations can respond to.
- The humanitarian logistics concept of operation helps organisations determine the logistics operation structure and processes that fit the context of the situation. Every logistical operation, especially in disaster response, is a "tailor-made" operation because each event is unique.
- A humanitarian logistics concept of operation includes a brief context summary, identified gaps and bottlenecks, planning assumptions and risk factors, organisational asset information, coordination mechanisms, and roles and responsibilities of actors involved.
- A logistics concept includes emergency logistics assessment, risk management, security plan, humanitarian logistics information systems, coordination mechanism, and operation plan.

3.3. Ensure logistics response plan is implemented

A. Introduction

Organising logistics operations during an emergency is challenging because all aspects of logistics need to be carried out on time and targeted in an environment far from ideal and full of uncertainty.

B. Challenges in emergency logistics operations

Common challenges in planning and implementing a logistics operation during emergencies:

- **Problem scale and complexity**

Large-scale disasters may devastate vast geographical areas and affect large populations. Logistic operations during a response involve damage assessments, demand estimation, resource distribution, and many more in a short amount of time. It also considers hard-to-measure factors like the unanticipated surge of local demand, transportation infrastructure damages, and the emergence of



secondary hazards. These features make problem structures in emergency logistics inherently complex. Furthermore, operational activities are interconnected and cannot be solved individually without considering their mutual impacts.

- **Different objectives and decision criteria**

Large-scale disasters may cause significant casualties and severe property damage. The main objectives of humanitarian logistics are to support efforts to save lives, alleviate human suffering, and reduce property damages, rather than the commercial objective of reducing operating costs and increasing profit for the business. Different stakeholders, however, put different weights on these objectives and raise several conflicts in decision-making. For instance, prioritising lifesaving may conflict with damage control.

- **Multiparty coordination problem**

Large-scale disaster response requires many actors to connect and interact in aid and relief efforts. The different sectors, professions, organisational structures, cultures, and functions involved make multi-stakeholder coordination very complex. Various actors have different incentives and motivations, competing for limited resources. The stakeholders can improve coordination by exchanging information, sharing resources, and dispatching jobs. The lack of coordination can worsen the impacts of the disaster.

- **Critical time requirement and real-time decision-making**

Any delay in the aid and relief efforts may cause severe consequences and cascading effects. Therefore, a timely response is crucial. This raises two challenges in humanitarian logistics. On the one hand, there is a need to speed up the response operation, such as the quick transportation of humanitarian aid through better scheduling. Sometimes, it is necessary to look for a quick, feasible solution rather than an unrealistically sophisticated optimal solution because time is critical. On the other hand, there is a need to speed up the decision-making process to reduce unnecessary delays. Real-time information gathering and decision support are critical.

- **Allocation of scarce resource**

Large-scale disasters may create a sudden massive demand for emergency supplies that greatly exceed resource availability. In this situation, the goal is to allocate scarce resources to different areas that



need them the most. However, setting up allocation principles and measuring resource allocation performance is not clear-cut and straightforward. It is a subject of much debate because, besides issues on efficiency and effectiveness, it involves questions of justice and fairness. With urgent needs and insufficient resources, what is a just and fair way to allocate resources?

- **Stochastic and scenario-based modelling**

In large-scale disaster response, it is usually difficult to accurately assess the damages and estimate resource requirements. Establishing a stochastic or scenario-based emergency logistics model can help humanitarian logisticians explore potential needs and prepare for eventualities.

- **Logistics with damaged infrastructure**

Large-scale disasters may cause extensive damage to communications, power supplies, and transportation infrastructures and make them unavailable for emergency relief operations. For example, disrupted transportation facilities may limit humanitarian aid access to disaster-affected regions, including ports, airports, roads, and bridges. Destroyed communication infrastructures such as telephone and radio towers can hamper information collection and sharing, slowing down the response. These additional constraints must be considered when planning and implementing emergency logistics operations.

C. Managing the implementation of the logistics response plan

The more steps in the logistics response plan, the more efficient and flexible the logistical system. Suppose several humanitarian aid packages need to be delivered and distributed to certain locations at different times. In that case, the organisation's supply chain needs to be efficient and flexible enough to respond to problems as they arise. The larger the operation, the more difficult it is to manage.

- **Take the time to make a solid plan**

Efficient logistic operations begin with proper planning—the fewer decisions that need to be made during the distribution process, the better. And while a solid plan can never cover every circumstance, it can keep ad hoc decision-making to a minimum. Therefore, a good logistics manager will plan well ahead to eliminate any delays in the supply chain as best they can.



- **Always have a contingency plan**

No matter how comprehensive a logistics response plan is, it's impossible to prepare for every possible eventuality. Therefore, a good logistics manager knows their job is far from done after the plan is made. They need to follow the supply chain at every point and resolve issues whenever they crop up. The logistics manager should have contingencies folded into the logistics response plan effectively. The team should also know when to stick it out with the original plan and switch to a backup plan, which can only come with experience.

- **Hire a team with strong interpersonal skills**

When a logistics response operation does not go according to plan, the person tasked with sorting out the problem must have excellent interpersonal skills. Suppose the logistics manager knows how to get along with people and has a solid network of humanitarian contacts. In that case, s/he'll be well-equipped to help the organisation solve their logistics problems. Whether someone within the organisation fits this profile or management needs to look outside the organisation, finding the right person for this position is a part of effective logistics management.

- **Automate the logistics system**

There are several ways an organisation can automate the logistics process in the digital age, including tracking and monitoring each delivery. Fleet and inventory management software can allow organisations to refine their most impacting objectives. These systems take the guesswork out of the planning of the supply chain by reporting the raw data.

- **Maintaining external communication and coordination**

Sometimes, after implementing a logistics response plan and the team starts to take on specific tasks, they will forget about regular coordination meetings or lose communication with other stakeholders. This should be avoided.

- **Learn from your mistakes**

Poor logistics management can cost an organisation a lot of money. Perhaps the most important thing an organisation can do when optimising the supply chain is to learn from past mistakes. Regularly sitting down as a team and openly discussing the errors made in the



past can help generate insights or solutions to ensure mistakes don't happen again.

D. Summary

- Organising logistics operations during an emergency is challenging because all aspects of logistics need to be carried out on time and targeted in an environment far from ideal and full of uncertainty.
- The more steps in the logistics response plan, the more efficient and flexible the logistical system. The larger the operation, the more difficult it is to manage.
- Ensuring that the humanitarian logistics plan is implemented well and that issues that emerge are quickly resolved are among the most significant responsibilities of a logistics manager during emergency response operations.





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 a 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 by ensuring 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 others' 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 thoughts.

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



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Recommended Readings

ICRC (International Committee of the Red Cross). (2017). *Acquiring And Analysing Data in Support of Evidence-Based Decisions: A Guide for Humanitarian Work*. Accessible [here](#)



Learning Resources

Howden, M. (2009). *How Humanitarian Logistics Information Systems Can Improve Humanitarian Supply Chains: A View from the Field*. Accessible [here](#)





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ASEAN Standards and Certification for Experts in Disaster Management

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