technical competency unit

ADM.TEC 010.1

Coordinate Logistics Operation

ASCEND
ASEAN Standards and Certification for Experts in Disaster Management
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 ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre) implements the ASCEND project in collaboration with the Korean National Fire Agency (KNFA) and support from the ASEAN Secretariat and the Republic of Korea.

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The ASCEND Programme and Toolbox Development:

Overview
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 of 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 of responding to large-scale disasters showed that realising the OAOR can be challenging. Various responders from different countries, institutions, organisations, and companies seek to contribute to the overall response. Their goodwill is appreciated, and several provide much-needed assistance. But ASEAN and affected Member States sometimes found it challenging to determine what knowledge and skills responders have and how they can effectively contribute to national and regional efforts.

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

1.2 The objectives of ASCEND

- To enhance the capacity of the ASEAN countries in the implementation of ASCEND.
- To establish regionally recognised Competency Standards and assessment processes covering five professions in disaster management.
• To improve the capacity of the AHA Centre to serve as the ASCEND Secretariat.
• To promote understanding of the ASCEND Framework among the ASEAN Member States (AMS) and other ASEAN sectors in preparation for the inclusion of ASCEND into the ASEAN Mutual Recognition Arrangement (MRA).

1.3 Advantages and benefits of an ASCEND certification

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

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

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

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

A set of technical requirements must exist before it is possible to implement the ASCEND programme in participating ASEAN Member States. The first requirement is the ASCEND Competency Standards that contains 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, is 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 presents 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 provides 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 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

ASEAN Standards and Certification for Experts in Disaster Management (ASCEND) Documents

Reference documents
- Declaration on One ASEAN One Response (OAOR) 2016
- AADMER Work Programme 2021 - 2025
- ASEAN Community Vision 2025
- ASEAN Economic Community Blueprint 2025
- Sendai Framework for Disaster Risk Reduction 2015 - 2030

ASCEND Framework
- Identifies the rationale behind ASCEND
- Illustrates the roadmap of the ASCEND Programme
- Establishes the principles for mapping of ASCEND Competency Standards
- Presents the ASCEND governance, cooperation, and coordination structure

ASCEND Competency Standards
- Presents the complete list of ASCEND core and technical competencies
- Documents and explains the components of each unit of competency
- Assigns competency standards to professions and occupations

ASCEND Toolbox Documents

ASCEND SOP for Certification
- Explains the purpose, objectives, and scope of ASCEND certification
- Defines the basis of the certification (framework and standards)
- Describes the institutional arrangements and mechanisms
- Details the procedures for certification (workflow and guidelines)

ASCEND Certification Schemes
- Provides an overview of the standards of a given ASCEND profession-occupation
- Lists the requirements, rights, and obligations of candidates and awardees
- Outlines the certification process of a given ASCEND profession-occupation

Assessor Guides
- Provides assessors with tools to validate, evaluate, and determine whether a candidate meets the competency standards
- Comes with teaching material to help prepare candidates for certification
- Offers a list of tools to encourage interactive learning

Assessor Training Modules
- Learner Guides
- Contains learning resources to complement their training
- Assist candidates in preparing for assessments

Trainer Guides
- Provides assessors with tools to validate, evaluate, and determine whether a candidate meets the competency standards
- Comes with teaching material to help prepare candidates for certification
- Offers a list of tools to encourage interactive learning

Learner Guides
- Contains learning resources to complement their training
- Assist candidates in preparing for assessments
Competency-based Training (CBT):
Introduction for Trainers

ADM.TEC.010.1
Trainer's Guide
**Important**: Training is not a mandatory activity of the ASCEND certification process. Applicants or prospective candidates are expected to prepare themselves before the assessment by self-studying the Learner Guides provided to them when accepted for ASCEND certification.

In case Authorised/Licensed National Certification Institutions decide to conduct training on material related to ASCEND, their trainers can use the contents of this guide to develop their courses or programmes. Candidates seeking certification may also use the “PowerPoint slides and presenter notes” section of this guide for self-study.

### Competency-based learning and assessment

**Competency** is the characteristic and ability to use or apply knowledge and skills-sets to perform critical job functions in a defined work setting.

<table>
<thead>
<tr>
<th>Competency area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience</td>
<td>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.</td>
</tr>
<tr>
<td>Knowledge</td>
<td>Refers to what the candidate needs to know to make informed decisions on how to perform the work effectively.</td>
</tr>
<tr>
<td>Skills</td>
<td>Refers to the ability of the candidate to apply knowledge to complete occupational tasks and produce work outcomes or results at the standard required.</td>
</tr>
<tr>
<td>Attitudes</td>
<td>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.</td>
</tr>
</tbody>
</table>
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 training (CBT) is a teaching strategy that aims to develop the candidate’s knowledge, skills, and attitudes to become qualified and competent to perform in a particular occupation. CBT builds on the candidate’s experience and uses different modes of instruction to assist them in meeting the standards and performance criteria defined in a unit of competency.

What do trainers do?

A trainer is someone who structures and facilitates the training of candidates to develop or increase their ability to communicate or demonstrate that they are competent in a specific unit of competency.

The role of trainers is to:

- interpret the scope and adapt the ASCEND competency standards to fit the context of where the training is taking place,
- adjust the training method and delivery of material to cater to learner diversity and needs, and
- assist candidates in preparing for competency-based assessments with the learning resources available.
Using the trainer’s guide

The material in this trainer guide is designed to assist trainers in conducting learner-centric activities that recognise prior experience, maximise engagement, teach for understanding, and build on learner strengths. The guide provides suggestions on how to prepare training sessions that enhance candidate participation and minimise disruptions during the session. It also offers a list of equipment and tools that trainers may use to encourage interactive learning and supplement traditional methods like lectures, case discussions, demonstrations, group exercises, simulation games, role-playing, and independent research. Finally, it includes a copy of PowerPoint presentation slides and presenter notes to guide trainers on what key messages to highlight during sessions.

Remarks: Trainers also need to consider the diverse backgrounds (e.g., cultural, linguistic, social) and needs of candidates when planning and delivering the training. Trainers may have to adapt their training style to suit student preferences, use alternative activities for different levels of ability, and provide opportunities for various forms of participation.
ASCEND Competency Standards
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 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 (pp. 36-40), 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 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. 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. Table 2 describes its main components.

**Table 2: Components of the ASCEND Competency Standards**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit title</td>
<td>Describes the critical work function to be performed in an occupation.</td>
</tr>
<tr>
<td>Unit number</td>
<td>A coding system to organise the units of competency. It also indicates the types of competency standards.</td>
</tr>
<tr>
<td></td>
<td>• 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.</td>
</tr>
<tr>
<td></td>
<td>• 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.</td>
</tr>
<tr>
<td>Unit description</td>
<td>Provides information about the critical work function covered by the unit.</td>
</tr>
<tr>
<td>Elements</td>
<td>Presents the occupational tasks required to perform the critical work function in the unit.</td>
</tr>
<tr>
<td>Performance criteria</td>
<td>Lists the expected outcomes or results from the occupational tasks to perform and the standard required.</td>
</tr>
<tr>
<td>Unit variables</td>
<td>Advises on how to interpret the scope and context of this unit of competence.</td>
</tr>
<tr>
<td>Assessment guide</td>
<td>Outlines the evidence to gather and evaluate to determine whether the candidate is competent in the unit.</td>
</tr>
<tr>
<td>Linkages to other units</td>
<td>Explains the connection of the competency standard to other units of competency.</td>
</tr>
<tr>
<td><strong>Critical aspects of assessment</strong></td>
<td>Lists the types of evidence or demonstrated abilities assessors need to observe to determine the candidate’s competency.</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Context of assessment</strong></td>
<td>Notes the settings or situations in which candidates need to demonstrate their ability during ASCEND assessments.</td>
</tr>
<tr>
<td><strong>Resource implications</strong></td>
<td>Identifies the resources needed to conduct the assessment.</td>
</tr>
<tr>
<td><strong>Assessment methods</strong></td>
<td>Describes the different assessment methods to assess the competency of candidates in the specific unit.</td>
</tr>
<tr>
<td><strong>Key competencies</strong></td>
<td>Presents the specific knowledge, skills, and attitudes related to the unit of competency that assessors need to evaluate to confirm whether the candidate for certification is qualified and competent.</td>
</tr>
</tbody>
</table>
3.3 Unit of Competency

Unit title: Coordinate Logistics Operation
Unit number: ADM.TEC.010.1

Unit description: This unit deals with skills and knowledge required by a logistics coordinator to understand overall logistics operations, focus on the knowledge about implementation of transport, storage and distribution plan to support the operations.

<table>
<thead>
<tr>
<th>ELEMENT AND PERFORMANCE CRITERIA</th>
<th>UNIT VARIABLE AND ASSESSMENT GUIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Element 1. Implement transport plan</strong></td>
<td><strong>Unit Variables</strong></td>
</tr>
<tr>
<td>1.1 Identify transportation mode</td>
<td>The unit variables provide advice to interpret the scope and context of this unit of competence. It relates to the unit as a whole and facilitates holistic assessment.</td>
</tr>
<tr>
<td>1.2 Identify fleet availability</td>
<td>The objective of this unit is to ensure the participants have a broader knowledge of logistics operation, consideration of choosing a storage location, transportation mode, distribution location and are expected to be fully aware of the challenges to face in logistics.</td>
</tr>
<tr>
<td>1.3 Identify supply route</td>
<td></td>
</tr>
<tr>
<td><strong>Element 2. Implement storage plan</strong></td>
<td>This unit also expects the participant to know warehouse management standards, including identifying the location and space requirements to support emergency operation.</td>
</tr>
<tr>
<td>2.1 Identify storage locations</td>
<td>The participant should identify the transport mode (Land, Rail, Water and Air transport) and select a suitable fleet to support the preposition of relief items, including a distribution plan during the emergency operation.</td>
</tr>
<tr>
<td>2.2 Identify storage requirement</td>
<td></td>
</tr>
<tr>
<td>2.3 Apply warehouse management standard</td>
<td></td>
</tr>
</tbody>
</table>

Assessment Guide

The following skills and knowledge must be assessed as part of this unit:

- Ability to identify transport mode
- Ability to identify logistics infrastructure (port, airport, storage, etc.)
• Ability to identify distribution route
• Ability to identify challenges in logistics operation
• Ability to apply the function of fleet management
• Ability to apply storage management systems and procedures
• Ability to coordinate the distribution plan with partners

Linkages to other Units

This is a technical unit for a logistics coordinator and must be delivered together with humanitarian logistics modules.

Critical Aspects of Assessment

Evidence of the following is essential:

• Demonstrated ability to identify transport mode
• Demonstrated ability to identify logistics infrastructure (port, airport, storage, etc.)
• Demonstrated ability to identify distribution route
• Demonstrated ability to identify challenges in logistics operation
• Demonstrated ability to apply the function of fleet management
• Demonstrated ability to apply storage management systems and procedures
• Demonstrated ability to coordinate the distribution plan with partners

Context of Assessment

This unit may be assessed on/off the job

• Assessment should include practical demonstration of working effectively with colleagues and assesses either in the workplace or through a simulation activity, supported by various methods to assess underpinning knowledge.
• Assessment must relate to the individual's work area or area of responsibility.

Resource Implications
Training and assessment to include access to an actual or simulated workplace; and access to workplace standards, procedures, policies, guidelines, tools and equipment

Assessment Methods

The following methods may be used to assess competency for this unit:

- Case studies
- Observing of practical performance by participant
- Oral and written questions
- Portfolio evidence
- Problem-solving
- Roleplays
- Third-party reports completed by a supervisor
- Project and assignment work

Key Competencies in this Unit

**Level 0** = irrelevant, not to be assessed  
**Level 1** = competence to undertake tasks effectively  
**Level 2** = competence to manage tasks  
**Level 3** = competence to use concepts for evaluating

<table>
<thead>
<tr>
<th>Key Competencies</th>
<th>Level</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collecting, organising, and analysing information</td>
<td>2</td>
<td>Relief items data</td>
</tr>
<tr>
<td>Communicating ideas and information</td>
<td>2</td>
<td>Coordinate with logistics service providers</td>
</tr>
<tr>
<td>Planning and organising activities</td>
<td>2</td>
<td>Develop transport plan</td>
</tr>
<tr>
<td>Working with others and in teams</td>
<td>2</td>
<td>Coordinate with manager and officer</td>
</tr>
<tr>
<td>Using mathematical ideas and techniques</td>
<td>3</td>
<td>Calculating the transport cost</td>
</tr>
<tr>
<td>Section</td>
<td>Score</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Solving problems</td>
<td>2</td>
<td>How to deal with local services provider</td>
</tr>
<tr>
<td>Using technology</td>
<td>2</td>
<td>Familiar with computer software, smartphone, etc.</td>
</tr>
</tbody>
</table>
Preparing for Training Sessions:

Equipment, Material, and Tools
# 4.1 Onsite training

Please refer to the checklist and table below when conducting onsite training.

<table>
<thead>
<tr>
<th>Checklist</th>
<th>Training resource requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td><strong>Equipment and material</strong></td>
</tr>
<tr>
<td></td>
<td>Secure a computer (desktop or laptop) installed with the latest Windows Operating Systems and Microsoft Office Apps (Word, PowerPoint, Excel).</td>
</tr>
<tr>
<td></td>
<td>Gain access to a stable internet connection and printer, if needed.</td>
</tr>
<tr>
<td></td>
<td>Reserve a conducive training facility with a dedicated workspace (large desk and chair with back support), projector, and black/whiteboards.</td>
</tr>
<tr>
<td></td>
<td>Obtain a copy of the Trainee Guide, including PowerPoint (PPT) presentation and presenter notes. Test if the PPT presentation is working before sessions.</td>
</tr>
<tr>
<td></td>
<td>Request a list of confirmed attendees (candidates) and their contact details.</td>
</tr>
<tr>
<td></td>
<td>Send training invitations to all confirmed attendees through email. It includes a brief overview of the training, date, schedule, training venue, information about the trainer, email support, and a copy of the Trainee Manual (PDF version).</td>
</tr>
<tr>
<td></td>
<td>Print out copies of the Trainee Manual, if needed.</td>
</tr>
</tbody>
</table>
4.2 Online training

Please refer to the checklist and table below when conducting online training (remote).

<table>
<thead>
<tr>
<th>Checklist</th>
<th>Training resource requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tick box (√) when completed</td>
<td>Equipment and material</td>
</tr>
</tbody>
</table>

- Secure a computer (desktop or laptop) installed with the latest Windows Operating Systems and Microsoft Office Apps (Word, PowerPoint, Excel).
- Gain access to a stable internet connection.
- Purchase a licensed video conferencing account, if needed (e.g., Zoom Meetings, Webex).
- Reserve a dedicated workspace (large desk and chair with back support).
- Obtain a copy of the Trainee Guide, including PowerPoint (PPT) presentation and presenter notes. Test if the PPT presentation is working before sessions.
- Request a list of confirmed attendees (candidates) and their contact details.
- Send training invitations to all confirmed attendees through email. It includes a brief overview of the training, date, schedule, Zoom log-in details, information about the trainer, email support, and a copy of the Trainee Manual (PDF version).

The list below recommends apps and tools that trainers may find helpful when planning and delivering the training. Trainers need to register and create their accounts before using the apps and tools.

<table>
<thead>
<tr>
<th>Apps and tools</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoom</td>
<td>Zoom is a software program that provides a multi-user platform for video and audio conferencing. It has built-in collaboration and presenter tools</td>
</tr>
</tbody>
</table>
useful in planning and delivering online training sessions like calendar integration, group chat, screen sharing, breakout rooms, and whiteboard functions.
https://zoom.us/  

### For collaboration, group exercises, lectures, and demonstrations.

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lucidspark</td>
<td>Lucidspark is a virtual whiteboard where training attendees can come together to create, develop, and present their ideas. It can be used for brainstorming, group presentations, and organizing notes. &lt;br&gt;<a href="https://lucidspark.com/">https://lucidspark.com/</a></td>
</tr>
<tr>
<td>Ziteboard</td>
<td>Ziteboard is a collaboration software ideal for discussing topics visually and online real-time tutoring. It works seamlessly on different devices (laptops, tablets, and mobile devices) and web browsers (Apple Safari and Google Chrome). &lt;br&gt;<a href="https://ziteboard.com/">https://ziteboard.com/</a></td>
</tr>
</tbody>
</table>

### For activities that test student understanding (quizzes) and decision-making (simulation games)

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kahoot</td>
<td>Kahoot is a game-based learning platform that allows users to generate multiple-choice quizzes for distance education. Users can create a learning game on any topic in any language, and they can host a live game and share it with users. &lt;br&gt;<a href="https://kahoot.com/">https://kahoot.com/</a></td>
</tr>
<tr>
<td>Quiz It! Live</td>
<td>Quiz It! Live is an app similar to Kahoot that allows users to create and host live quizzes for groups. It also comes with automated timing, scoring, and marking. &lt;br&gt;<a href="https://www.quizit.net/">https://www.quizit.net/</a></td>
</tr>
</tbody>
</table>

### For gathering feedback, ideas, or responses

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google Forms</td>
<td>Google Forms is a survey administration software for collecting and organising different kinds of information. Responses are automatically gathered and neatly presented in charts, sheets, and more. &lt;br&gt;<a href="https://www.google.com/forms/about/">https://www.google.com/forms/about/</a></td>
</tr>
<tr>
<td>Survey Monkey</td>
<td>Survey Monkey is the world’s most popular free online survey tool. Similar to Google Forms, users can create, send, and edit questionnaires. &lt;br&gt;<a href="https://www.surveymonkey.com/">https://www.surveymonkey.com/</a></td>
</tr>
</tbody>
</table>
PowerPoint Slides and Presenter Notes
5.1 Instructions for using PowerPoint presenter

The PowerPoint Presenter View allows you to view your presentation together with the presenter notes on your computer’s monitor, while attendees view the note-free presentation on another monitor. It allows you to move the slides, control the pace of the presentation, see the elapsed time of your presentation, and use a tool to draw on point or highlight parts of the presentation.

Connect your computer (desktop or laptop) to a projector. Double click on the PowerPoint presentation to open the file. In PowerPoint, click on the Slide Show tab and select the Use Presenter View checkbox. Choose which monitor to display Presenter View ON. Finally, select From Beginning or press f5.

For more information, visit the Microsoft PowerPoint help & learning website: https://support.microsoft.com/en-us/powerpoint

A video tutorial is available here: https://support.microsoft.com/en-us/office/use-presenter-view-in-powerpoint-fe7638e4-76fb-4349-8d81-5eb6679f49d7
5.2 PowerPoint slides and presenter notes

Image 1: Slide 1

Slide No. 1

Trainer Notes

Trainer welcomes participants to class.
Slide No. 2

Trainer Notes
Read the “Competency Unit” in the Trainer Guide and introduce the elements of the competency unit to learners.

- Each Element comprises a number of Performance Criteria which will be identified throughout the class and explained in detail
- Participants can obtain more detail from their Learner’s Guide
- At times the course presents advice and information about various protocols. Still, where their workplace requirements differ from what is presented, workplace practices, standards, policies, and procedures must be observed.
Element 1
Implement transport plan

Performance Criteria

- **1.1** Identify transportation mode
- **1.2** Identify fleet availability
- **1.3** Identify supply route

**Trainer Notes**
Briefly talk about the sub-elements of Element 1 and why Humanitarian Logistics professionals must know these.
Identify transportation mode

Introduction

- Humanitarian agencies seek to maximise the impact of emergency response by meeting urgent needs and preventing further damage. Response or lead time reduction is an important consideration.
- Determining the quickest way, the right type of transportation to distribute aid, and managing vehicle routing is critical to any emergency response.
- The primary challenge in vehicle routing is to find out the shortest time path between origin and destination.
- Unlike the usual vehicle routing problems, the emergency vehicle routing problem minimises the sum of arrival times instead of minimising the cost.

Slide No. 4

Trainer Notes

- Network design includes defining the routes and allocating the available resources (primarily vehicles and tasks such as structure stabilisation and roadway repair). The network's performance is evaluated by network vulnerability analysis and network reliability analysis.
- Vulnerability analysis examines the connectivity between all origin-destination pairs following a disaster. Network reliability analysis evaluates the stability of a transportation network under different circumstances.
Identify transportation mode

Major transport considerations

- Major points, border crossings and transport routes (road, rail, river), including trans-shipment points (airports, landing strips, helipads) serving the emergency zone.
- Mountain ranges, flood-prone areas, damaged or vulnerable bridges, ferry crossings, or routes susceptible to landslides or security problems.
- Expected seasonal effects on transport, storage and handling operations.
- The security situation in the area of operations and along the relevant road, rail and river corridors. Current and potential security measures to protect stocks, transport, and warehouses.
- Political or military effects on transport, storage and handling, operations and capacity.

Slide No. 5

Trainer Notes

- For bullet point 1: Review the compensations to consider whether the trans-shipment points have sufficient capacity.
- For bullet point 2: Consider when you intend to move through a route (i.e. the height of the river, road conditions).
- For bullet point 3: Does the vehicle fleet capacity for seasonal conditions? Does the warehouse have the capacity to withstand heavy winds, rain, and snow?
- For bullet point 4: If the military is conducting operations in a particular area, you may not want to go into that area simultaneously.
Parameters in selecting the mode of transport:

a. Speed
The mode of transportation determines the speed at which goods can be moved. However, the modal infrastructure’s nature can impact the relative speed of that mode. Environmental factors, such as congestion on roads and the impact of adverse weather conditions, can impact the ability of transportation to move at the optimal modal speed.

b. Reliability
The reliability of the mode of transport lies in its ability to fulfil service requirements. The reliability of a transport service to deliver the correct goods, in the right condition at the required time, every time, is critical. Unreliable service in terms of planned aid delivery can have a critical impact on the ability of a program team to meet its humanitarian objectives.

c. Cost
The cost of a mode of transport is often expressed in terms of unit costs for transporting the goods or materials, rather than an absolute figure. It could be expressed as a cost per sack, per ton, per pallet or similar. The distance the goods have to travel must also be considered. Therefore, the modal cost can also be expressed as a value per ton kilometre. For instance, transport could be quoted as a cost per 24-ton load from point A to B. Understanding costs at this level of detail allows for more precise comparison of different modes. If the goods are in the form of a full load and there is a choice of available modes for the consignment size, the absolute cost for transportation could be compared.

d. Flexibility
Flexibility relates to the scope for variation in a mode of transport. The infrastructure within which a mode has to operate will affect the flexibility of that mode. Comparatively speaking, road transport is a very flexible mode due to the road infrastructure in most countries. Rail, for example, is less flexible, being constrained by the available fixed infrastructure.
identify transportation mode

road transport considerations:
- primary, secondary, village roads and tracks
- security concerns and measures for particular routes or locations. would the routes become impassable due to floods, snow, landmines or insecurity?
- the types and sizes of cargo trucks that can pass on each road type/route (noting seasonal variations)
- bridges: types and capacities weight limits
- fuel
- potentially dangerous overhangs: steep hills, tunnels
- river crossings or ferries with expected delays, tolls, etc.,
- present and foreseeable bottlenecks and possibilities to overcome them to increase the efficiency of the operation

rail transport considerations:
- condition of rail tracks
- present level of cargo movement: any anticipated changes
- major transit points: location, wagon capacity, sidings, storage capacity
- reliability and security of cargo movements
- type and number of usable cargo rail-wagons
- type and number of usable locomotives
- rate of through-put from points of origin to storage facilities
- procedures at transit points
- security concerns and measures for specific routes or locations
- type and access to fuel
- present and foreseeable bottlenecks

water transport consideration:
port
• Permissible vessel specifications for bulk and bagged cereal
• Cargo handling equipment – numbers and capacity of cranes and forklifts
• Discharge rates to warehouses, trucks, rail wagons, barges
• Location, number of quays
• Present level of functioning
• Superintendence, shipping and forwarding agencies present and their fee rates
• Current and foreseeable bottlenecks, possibilities to overcome them and increase efficiency
• Customs procedures, handling costs, taxes
• Security concerns

**River corridors**
• Draught, speed of current, permissible vessel specifications and carrying capacity (with seasonal variations), tides
• Customs and other considerations where a river marks an international frontier
• Local norms/practices for contracting river transport
• Available boats, barges, tugs, canoes
• River width, length, hazards (rapids)

**Air transport considerations:**
• Runway length, width, surface, load classification and orientation
• Location and height of any obstructions along the runway or in approach/departure zones
• Present and potential weather constraints (e.g., fog, strong winds)
• Aircraft types that can operate
• Available navigation aids and support
• Availability of night lighting and the reliability of power supplies
• Operating hours: the level of sustainable activity, times when relief aircraft can be best be accommodated
• Air operations that are present and occur regularly
• Customs procedures
### Identify transportation mode

Range and payload capabilities of helicopters and aircraft used in humanitarian logistics.

<table>
<thead>
<tr>
<th>TYPE OF HELICOPTER</th>
<th>MAX RANGE</th>
<th>PAYLOAD KG</th>
<th>PAYLOAD KG FOR × 100 NM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bell 206L-4</td>
<td>320 Nmi</td>
<td>200</td>
<td>600</td>
</tr>
<tr>
<td>Bell 209 B2</td>
<td>350 N/A</td>
<td>N/A</td>
<td>900</td>
</tr>
<tr>
<td>Bell 212</td>
<td>200 N/A</td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>Skorpion 5-76C</td>
<td>110 N/A</td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>Super Puma L1</td>
<td>412 2.043</td>
<td>4,470</td>
<td></td>
</tr>
<tr>
<td>Super Puma L2</td>
<td>450 3.046</td>
<td>4,922</td>
<td></td>
</tr>
<tr>
<td>Super Freak 9A 201</td>
<td>460 3.000</td>
<td>5,200</td>
<td></td>
</tr>
<tr>
<td>Super Puma 332 C1</td>
<td>360 N/A</td>
<td>4,050</td>
<td></td>
</tr>
<tr>
<td>Mi-8</td>
<td>270 / 518</td>
<td>N/A</td>
<td>3,000</td>
</tr>
<tr>
<td>Mi-17</td>
<td>367 N/A</td>
<td>3,000 – 4,000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TYPE OF AIRCRAFT</th>
<th>MAX RANGE</th>
<th>MAX PAYLOAD</th>
<th>MAXIMUM CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hercules C130</td>
<td>3,700</td>
<td>20.0</td>
<td>130</td>
</tr>
<tr>
<td>Antonov AN12</td>
<td>2,110</td>
<td>18.0</td>
<td>90</td>
</tr>
<tr>
<td>Antonov AN124</td>
<td>6,500</td>
<td>120.0</td>
<td>850</td>
</tr>
<tr>
<td>Byskhan 5.76</td>
<td>3,800</td>
<td>16.0</td>
<td>160</td>
</tr>
<tr>
<td>Boeing 727</td>
<td>4,700</td>
<td>42.0</td>
<td>250</td>
</tr>
<tr>
<td>De Havilland Buffalo</td>
<td>3,600</td>
<td>12.0</td>
<td>N/A</td>
</tr>
<tr>
<td>Twin Otter</td>
<td>1,700</td>
<td>2.3</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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**Slide No. 8**

**Trainer Notes**

Range and payload capabilities of helicopters and aircraft used in humanitarian logistics.
Other modes of transport

- In some emergency operations and situations, the only possible means of transport is by an animal, for example, the final transportation to very remote villages.
- Managing a caravan of animals is not easy, and the best way to deal with this is to rent them from an owner. Therefore, the owner will be in charge of all logistical aspects of the “convoy”.
- It is essential to ensure that sufficient food/feed and water are available en route.
- The goods being moved must be packaged in relation to the weight that a particular animal can carry. These may vary locally because of climatic or other local conditions. The table shows the animals used most frequently in such situations and their load capacity and work rate.
Some essential transportation resources such as airports, seaports, railways, and roads may be destroyed during the initial period. Any restoration attempts change the availability status of such essential nodes.
Identify fleet availability

Determining the type of transport needed

1. The nature of the supplies to be transported.
2. The weight and volume of the load.
3. The distance, mode of transport and conditions to the destination.
4. The urgency of delivery.

There are four things to consider when determining the type and quantity of transportation for humanitarian logistics.
Other modes of transport

- In some emergency operations and situations, the only possible means of transport is by an animal, for example, the final transportation to very remote villages.
- Managing a caravan of animals is not easy, and the best way to deal with this is to rent them from an owner. Therefore, the owner will be in charge of all logistical aspects of the "convoy".
- The big difference between a truck and an animal is that it is eating and drinking even if the animal does not move. Ensuring that sufficient food and water are available en route is important.
- The goods being moved must be packaged in relation to the weight that a particular animal can carry. These may vary locally because of climatic or other local conditions. The table shows the animals used most frequently in such situations and their load capacity and work rate.
Stowage factor (SF)

- In cases where complex goods are required, their volume and weight need to be considered. It is better to start taking into account the STOWAGE FACTOR (SF).
- Stowage Factor (SF) is the volume occupied by one unit of mass (weight) when stowed in cargo space.

Volume (cbm) / Weight (mt)
Slide No. 14

Trainer Notes

- Broken stowage is lost cargo space due to the contour of the hull of a vessel and/or the shape of the cargo. Dunnage, ladders, and stanchions are an example of broken stowage.

Broken stowage is shown as a percentage figure, which estimates the space that will be lost.
1.2 Identify fleet availability

Stowage factor (SF)
Example:
- We will load a box with the following characteristics:
- Weight: 0.4 MT, Dimensions: 1.5m x 1.6m x 0.75m = Volume of 1.8 cubic meters (CBM). So, stowage factor is 1.8/0.4= 4.5.
- On the other hand, a 25 MT truck with a capacity of 42 cubic meters will have a stowage factor of 1.68.
- So, in this case, the volume will be the limiting factor.
In conflict areas, humanitarian organisations may be unable to use military transportation resources without compromising their independence. The decision to accept services of armed forces is highly political. It will also depend on the donors funding the humanitarian organisation. Cooperation can lead to closer association of humanitarian organisations with political and military objectives of armed forces and increase insecurity for humanitarian workers.

- Some humanitarian organisations believe that armed forces should not be involved in providing humanitarian assistance. Others think that humanitarian organisations should accept military assistance if they are overwhelmed.

- Likewise, sharing transportation resources with other humanitarian organisations may have substantial political implications, especially if humanitarian organisations providing transportation services do not strictly respect their neutrality towards all conflict parties. Cooperation with one party to the conflict may make it impossible to safely operate within the area under the control of an opposing party and, therefore, erode impartiality in the conflict.

- Sharing transportation resources with other humanitarian organisations may also have substantial political implications, especially if humanitarian organisations providing the transportation services do not strictly respect and adhere to the neutrality principle.
Each type of commercial shipping service has a different calculation method, as listed below:

- **Airfreight, road transport and courier services** are charged per kilo. However, if goods in relation to their weight occupy much space, the charge will be over the volume weight. This is often the case for bicycles and furniture.

- **Airfreight and road transport**: The volume ratio is 1:6 or 1 metric ton 1000:6 = 166.66 kilos. This means that 167 kilos should not exceed the space of 1 cubic meter. If a consignment of bicycles and furniture weighs 167 kilos and takes space for 1.73 cubic meters. Consequently, charge is over: 1.73M³ x 166.66 = 288 volume kilos. WBS will establish which of the two are the highest (actual or volume weight).

- **Courier services**: The volume ratio is 1:5 or 1 metric ton 1000:5 = 200 kilos. This means that 200 kilos should not exceed the space of 1 cubic meter. If a consignment has an actual weight of 200 kilos and takes space for 1.73 cubic meters, the charge is over: 1.73M³ x 200 = 346 kilos volume weight. WBS will establish which of the two are the highest (actual or volume weight).

- **Sea freight**: The volume ratio is 1:1. 1 metric ton equals 1000 kilos. The actual weight is also needed, but sea freight is always calculated over the volume.
Identify fleet availability

Types of contracts: Advantages and disadvantages

- Different types of contracts have their own advantages and disadvantages. Therefore, it is essential to evaluate the particular requirements of the shipment and carefully review what is included in the fare (e.g., loading and offloading, the driver’s fees).
- When planning to hire a firm’s transport services, it is helpful to bear in mind the issues outlined in the table.
### Identify fleet availability

#### Ownership of transportation: In-house vs Outsourced

<table>
<thead>
<tr>
<th>ADVANTAGE</th>
<th>DISADVANTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-house transportation</td>
<td></td>
</tr>
<tr>
<td>- Independence from shortages of commercial transportation capacity.</td>
<td></td>
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<tr>
<td>- Able to mitigate costs from unreasonable price increases.</td>
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<tr>
<td>- Greater control over routing and scheduling.</td>
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<tr>
<td>- Better control over transported consignments.</td>
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<tr>
<td>- Higher acceptance by conflict parties.</td>
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<tr>
<td>- Often easier to communicate.</td>
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<tr>
<td>- Large investment in purchasing assets.</td>
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<tr>
<td>- Infertility by increasing or reducing transportation capacity.</td>
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</tr>
<tr>
<td>- Fixed costs independent of utilisation.</td>
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</tr>
<tr>
<td>- Infertility (assets may not be suitable for all operations).</td>
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<tr>
<td>- High costs and delays for moving transportation means to other operations.</td>
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<tr>
<td>- Requires skilled and experienced staff for maintaining and operating.</td>
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<tr>
<td>- Cost inefficiency because of lack of backhauls.</td>
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<tr>
<td>- May not be a core competency.</td>
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</tr>
</tbody>
</table>

Like commercial organisations, humanitarian organisations can use private contracts or common carriage to distribute humanitarian assistance goods within the supply network.

Trainer explains in-house transportation.
**Identify fleet availability**

**Ownership of transportation: In-house vs Outsourced**

<table>
<thead>
<tr>
<th>In-house Transportation with commercial carriers</th>
<th>Outsourced Transportation to commercial carriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cloud flexibility in transportation capabilities</td>
<td>• Cloud flexibility in transportation capabilities</td>
</tr>
<tr>
<td>• Flexibility in choice of types of means of transportation</td>
<td>• Flexibility in choice of types of means of transportation</td>
</tr>
<tr>
<td>• More experience</td>
<td>• More experience</td>
</tr>
<tr>
<td>• Possible unavailability of carriers</td>
<td>• Possible unavailability of carriers</td>
</tr>
<tr>
<td>• Flexibility in choice of types of means of transportation</td>
<td>• Flexibility in choice of types of means of transportation</td>
</tr>
<tr>
<td>• More experience</td>
<td>• More experience</td>
</tr>
</tbody>
</table>

- Transportation issues:
  - Prior control on costs and risk of delays
  - Higher customer expectations and services
  - Need for investment in new technologies
  - Transportation failure in different countries
  - Higher levels of transportation and safety risks

- Flexibility in choice of types of means of transportation

- In-housen vs. Outsourced:
  - In-house: high cost, high risk, high investment
  - Outsourced: low cost, low risk, low investment

**Trainer**

Trainer explains outsourcing transportation to commercial carriers

**Notes**

- Trainer explains outsourcing transportation to commercial carriers
Identify supply route

Introduction

Humanitarian logistics planning involves identifying the optimal distribution routes so that aid and relief reach affected communities as quickly as possible to minimise suffering.

It is essential to consider the different modes of transport and supply routes when designing preparedness plans.

Efficient planning should achieve a robust yet flexible relief distribution mechanism well suited to operate in disaster-affected areas.

Trainer Notes

None.
Selecting the route

- The **safest route** must be chosen as a general principle even if it is not the fastest or shortest one.
- When deciding on the route, it is important to identify **key services** along the way, such as places where one may obtain fuel, food, mechanical repairs, or medical care.
- It is essential to identify **potentially insecure conditions**, such as roads in bad condition, landslide-prone areas, or sectors where armed elements are known to operate.
- **Any change or deviation** from the agreed-upon route and any other special situation that may arise during the trip must be communicated immediately to the nearest base, whether it is the point of departure, the delivery point, or a base in between.
The route taken for distributing goods and travelling with the team will likely be different from one operation to another. It all depends on the needs, budget, security factors, availability of resources and supporting infrastructure.

An assessment (e.g., LCA conducted in the preparedness phase or a rapid assessment immediately after a disaster occurs) can provide essential information.

The points from the logistics assessment that form part of the analysis of determining distribution and travel routes are:

**a. Context**
- Country and area where humanitarian assistance is necessary.
- Geography, topography, and climate.
- Nature of the conflict and emergency.
- Locations where immediate needs are expected to be the greatest.
- Location of border crossings, seaports and airports.

**b. Security**
- Risk of criminality (theft, robbery, murder, etc.).
- Risk of armed banditry (kidnapping, high jacking, etc.).
- Risk of lawlessness (riots, looting, etc.).
- Conflict-related risks (shooting, explosive devices, mines, artillery, aerial bombing, etc.).
- Presence and availability of a police force.
- The general discipline of the combatants.
- Military operations in the area.
- The attitude of parties in conflict towards humanitarian organisations and their programs.
• Vicinity of offices, warehouses, and workshops to military installations.
• Security of transportation infrastructure (roads, seaports, airports, railheads, etc.).
• Security risk of driving by night.
• Use of transportation infrastructure by the military (roads, airports, seaports, etc.).
• Danger of natural hazards (floods, tornados, earthquakes, landslides, avalanches, etc.).
• Dangers from industrial installations (dams, power plants, nuclear plants, etc.).

c. Communications systems
• Availability, capacity, reliability, and coverage of public mail services.
• Availability, capacity, reliability, and coverage of private mail services (courier services).
• Availability, reliability, and cost of mobile telephone networks.
• Availability, reliability, and cost of satellite telephony.
• Availability, reliability frequencies, and coverage of VHF and UHF networks.
• Availability, reliability frequencies, and coverage of HF networks.
• Availability and quality of maintenance and repair services for communications equipment.
• Regulatory licensing authorities for radio equipment.
• Available radio frequencies.
• Communication infrastructure of civilian authorities.

d. Utilities
• Availability, reliability, and cost of fuel (gasoline diesel).
• Distribution system for fuel.
• Source of fuel and dependency on importation

e. Distribution management
• Location of stores, distance from beneficiaries and system of distribution.
• Main routes and distribution network (suppliers, warehouses, and beneficiaries).
• Number of beneficiaries serviced.
• Delivery frequency.

f. Transportation
• For all modes of transportation, the infrastructure (roads, bridges, seaports, airports) and the means of transportation (vehicles, vessels, aircraft) need to be considered.
• Availability, services, and costs of freight forwarding agents.
• Possibility and infrastructure for intermodal transportation
Element 2
Implement storage plan

Performance Criteria

- 2.1 Identify storage locations
- 2.2 Identify storage requirement
- 2.3 Apply warehouse management standard

Briefly talk about the sub-elements of Element 2 and why it is essential for Humanitarian Logistics professionals to know these.
Some warehouses are specially designed to facilitate storage, having the necessary space and characteristics for the safe loading, offloading, and handling of the merchandise.

However, in most emergencies, one has to settle for available spaces—often schools, community centres, gyms, and the like, that are not designed for storage.
• Some warehouses are specially designed to facilitate storage, having the necessary space and characteristics for the safe loading, offloading, and handling of the merchandise.
• However, in most emergencies, one has to settle for available spaces—often schools, community centres, gyms, and the like, that are not designed for storage.
The slide shows criteria that must be considered when selecting an area for an aid warehouse.

a. **Secure area**: the selected area must be safe from all kinds of threats such as natural hazards or security disturbances.
b. **Contamination free soil**: the land allocated for the food aid warehouse must be free from all kinds of contamination and toxic substances. For example, the area allocated should never be used by a cement factory.
c. **Open ground**: it must be an open ground area and must not be around a busy community area.
d. **Clean**: it must be clean from trash, bushes, pollution, and contamination.
e. **Solid structure, firm floor**: a solid structure building for warehouse.
f. **Ventilated and dry**: the warehouse must have adequate ventilation and no leaks when it rains.
g. **Protection against extreme weather**: the warehouse must have good ventilation for dry seasons and provide adequate equipment such as tarps and pallets.
h. **Protection against animals, insects**: the warehouse must be free from infestation from common pests such as rodents, weevils, and other pests usually found in and around food aid warehouses.
i. **Accessible to trucks**: the warehouse must be in an open area or in an industrial area with good road access for heavy vehicles to come into and exit the warehouse compound. Also, there should be enough space to manoeuvre in the warehouse compound.
j. **Access for loading unloading:** the warehouse must provide the facilities for loading and offloading activities (Loading and offloading docks must be available). It is also advisable that the warehouse gate be at least 6 (six) meters wide.

k. **Storage capacity:** the warehouse must have an elevation of between 1 and 1.5 meters from the ground. It should also have an adequate storage capacity to accommodate the incoming commodities. During the peak operation period, there will be a high and continuous flow of incoming commodities into the warehouse. Warehouse managers and storekeepers must calculate the warehouse’s storage capacity and inform senior management about the available storage capacity.

l. **Sanitary facilities:** facilities such as toilets are considered very IMPORTANT for warehouse activities for hygiene purposes. Adequate and clean warehouse toilets for staff, warehouse labourers, and transporters/truckers must always be available within the warehouse compound.

m. **Electricity:** provision of adequate lighting is essential for warehouse security. It facilitates the operation of electricity-powered equipment such as computers and storage and handling equipment if available.

n. **Secure from thefts:** the warehouse must be secure from thefts with sufficient security guards, adequate lighting, and a strong perimeter fence/wall.
   • It is challenging to find an ideal warehouse that matches all of the points above, especially during the emergency phase. Sometimes we have to weigh which points are more critical and sacrifice one criterion to get the other.
The staff positions listed are either directly or indirectly responsible for running operations in the warehouse.

After choosing the right location and infrastructure for a warehouse, the next step is to operate the warehouse optimally. The warehouse needs to have proper staffing and suitable equipment to function well.
Some basic equipment and materials are required to ensure that the warehouse functions properly. It is essential to understand that the selection of any warehouse equipment must balance the operational efficiency and the cost to obtain the equipment.

At the same time, there is a need to meet the overall requirements of the operation within constraints imposed by warehouse size, warehouse layout, product, and processes. The following are some examples.
Some basic equipment and materials are required to ensure that the warehouse functions properly. It is important to understand that the selection of any warehouse equipment must balance the operational efficiency and the cost to obtain the equipment.

At the same time, there is a need to meet the overall requirements of the operation within constraints imposed by warehouse size, warehouse layout, product, and processes. The following are some examples.
Objectives of warehouse and stores management:

- Security of stores and warehouses as well as stored goods.
- Safety of staff and prevention of accidents.
- Availability of qualified staff and maintaining adequate staffing levels.
- Cleanliness of stores and warehouses.
- Keeping good order of stock.
- Protection of goods from vermin and pests.
- Maintenance of building, facilities, storage, and materials handling equipment.
- Accurate record-keeping.
- Preventing theft of goods.
- Preventing deterioration of goods caused by inappropriate storage conditions.
- Preventing expiry of goods in stock.
Apply warehouse management standard

### Safety and Security Management

**Safety**: Health/safety of personnel and visitors, protection against accidents
- Staff and occupational safety: Handling of goods, material handling equipment, dangerous goods
- Fire safety: Prevent fires, detection of fires, measures for fighting fires
- Safety from electrical hazards: Faulty electrical wiring, overloading, broken equipment

**Security**: Physical security of warehouse and its contents, protection against thefts
- Limit and control access
- Control on exit
- Physical barriers
- Detecting theft

### Warehouse maintenance

- Preventive maintenance: Recruitment and training, safety equipment and precautions, hygiene and pest control
- Planned maintenance: Regular maintenance plan, routine checks

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**Trainer Notes**

- Good safety and security measures in the warehouse can enhance productivity, reduce accidents, increase donor trust, and reduce operational costs.

- **Safety**: Safety is often not taken as seriously as it should until an accident occurs. National regulations on safety may not be existent or not be enforced. Nevertheless, it is the responsibility of warehouse managers to prevent staff injuries as far as possible. In many countries in which humanitarian organisations work, staff are not covered by health insurance. Apart from the injury and possible disabilities, injuries, which lead to the loss of capacity to work, can lead to the loss of livelihood for the staff member and her/his family.

- **Security**: Attempts should be made not to attract unnecessary attention. Avoid placing large signboards if the risk of theft is high. The challenge is how to balance security and visibility (the organisation’s presence and their work). The logistics team should coordinate with the security team in determining the optimal arrangements to ensure that the staff, premises, and commodities are safe.

- **Warehouse maintenance**: All productive, well-run warehouses have one thing in common: regularly maintained. Like a clean household, every warehouse needs some sort of regular schedule to keep everything on track. This means routine inspections, regular cleanings, safety checks, and much more for warehouses.
• Carrying out regular inspections and maintenance help determine the condition of buildings, particularly their electrical installations, locks, roof, and structural integrity. Conduct the necessary repairs or replacements as soon as possible to prevent damages or losses from getting worse.
THANK YOU

Trainer's Notes
Close presentation and thank the participants.