

2nd Edition



# WATER, SANITATION & HYGIENE

Certification Scheme

ENGINEER



ONE ASEAN  
ONE RESPONSE

# ASCEND

ASEAN Standards and Certification  
for Experts in Disaster Management

## ASEAN Standards and Certification for Experts in Disaster Management

# WATER, SANITATION & HYGIENE Engineer

ADM.CSC.012.2

## Certification Scheme

**ONE ASEAN  
ONE RESPONSE**

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

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

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

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# Table of Contents

<b>ASCEND PROGRAMME AND TOOLBOX: INTRODUCTION</b>	<b>1</b>
1.1 The ASCEND Programme	2
1.2 The Objectives of ASCEND	3
1.3 Advantages and Benefits of an ASCEND Certification	3
1.4 The ASCEND Toolbox	4
<b>ASCEND CERTIFICATION SCHEMES: OVERVIEW</b>	<b>6</b>
2.1 Purpose and Aims	7
2.2 Scope	7
2.3 Basis and Framework	9
2.4 ASCEND Competency Standards	10
<b>ASCEND WASH ENGINEER: CERTIFICATION</b>	<b>13</b>
3.1 Overview of ASCEND WASH Engineer	14
3.2 Competency Standards in Scope	15
3.3 Basic Requirements of Candidates for Certification	16
3.4 Rights of Candidates for Certification	16
3.5 Obligations of Certificate Holders	17
3.6 Certification Fees and Costs	17
<b>ASCEND CERTIFICATION SCHEME: PROCESS</b>	<b>18</b>
4.1 Summary of the Certification Process	19



ASCEND Programme and Toolbox:

# Introduction



**1.1**

## The ASCEND Programme

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

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

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

## 1.2

# The Objectives of ASCEND

- To build competent disaster management professionals to reduce the loss of life, respond effectively, recover more quickly, and reduce disaster risk throughout the ASEAN region wherever possible. Note: In case of extraordinary, diminished capacities, non-certified persons may be utilised at the discretion of the AMS in compliance with local regulations, rules and/or laws.
- To guide the certification of disaster management professionals across the ASEAN Member States to perform tasks across all strategic components of AADMER, i.e. impact assessment and awareness, preparedness and response, and recovery.
- To increase the capacity of disaster management professionals to be able to respond and work interchangeably and cooperatively in their home country and all AMS.

## 1.3

# Advantages and Benefits of an ASCEND Certification

### For ASEAN

The ASCEND certification enables ASEAN Member States to effectively manage emergencies and disasters by fostering a regional network of qualified 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 to determine the capabilities of certificate holders in performing critical job functions of specific occupations in the disaster management sector.

## 1.4

# The ASCEND Toolbox

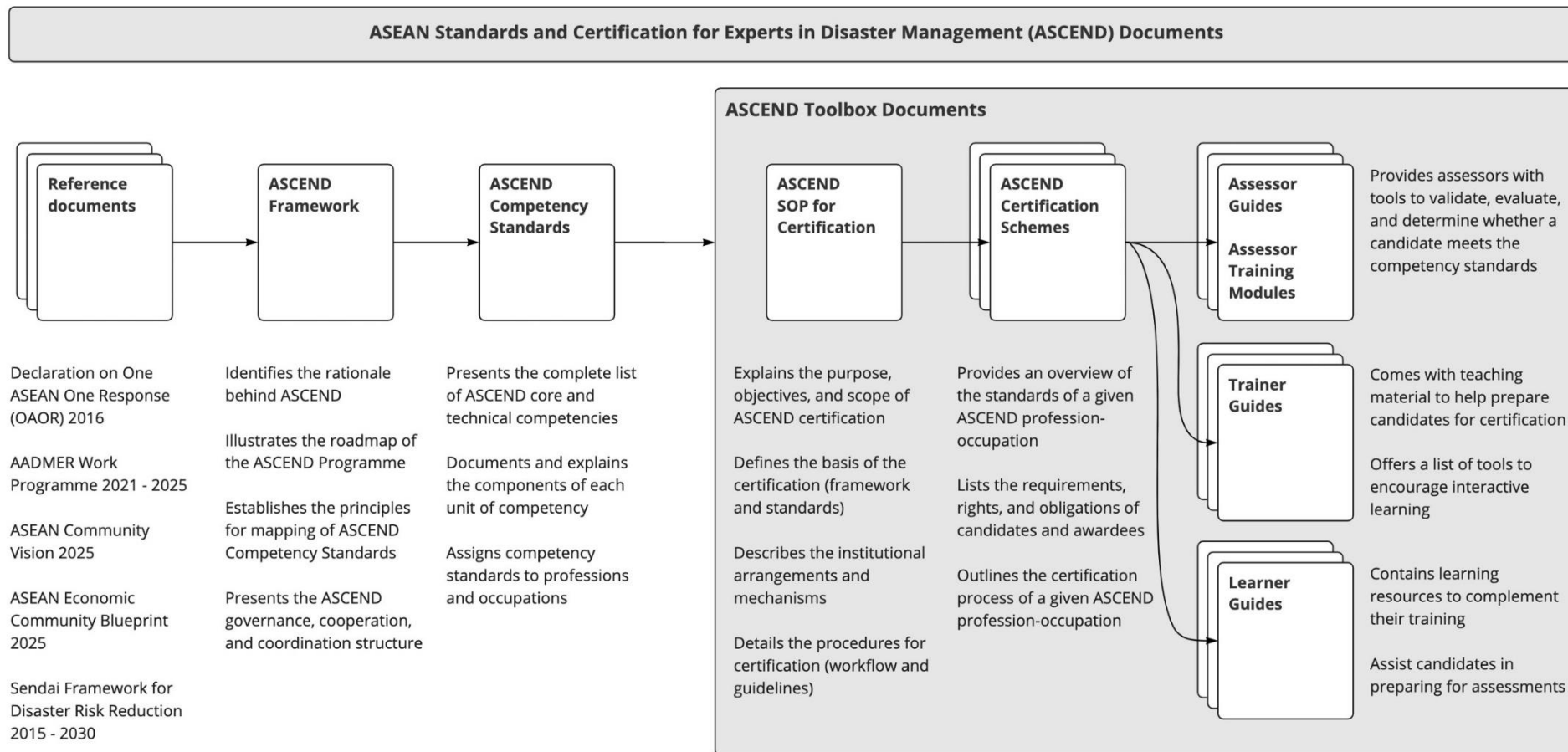
A set of technical requirements must exist before it is possible to implement the ASCEND programme in participating ASEAN Member States. The first requirement is the ASCEND Competency Standards, containing forty-three (43) regionally recognised core and technical competencies in selected disaster management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

Another requirement is the development of ASCEND Toolbox for five professions namely Rapid Assessment, Humanitarian Logistics, Information Management, Water, Sanitation and Hygiene (WASH), and Humanitarian Shelter & Settlement. ASCEND Toolbox consists of a Standard Operating Procedure (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** present an overview of the standards of each profession-occupation and certification requirements, the rights and obligations of candidates and certificate holders, and general guidelines on the certification process. **Assessor Guides** provide assessors with tools to validate, evaluate, and determine whether a candidate meets the Competency Standards. **Trainer Guides** come with PowerPoint slides and presenter notes to help trainers prepare candidates for certification. It also offers a list of tools trainers may use to encourage interactive learning. **Learner Guides** assist candidates preparing for ASCEND certification in their chosen disaster management profession and occupation. It contains learning resources and complementary readings to help prepare them to undergo the required assessment.

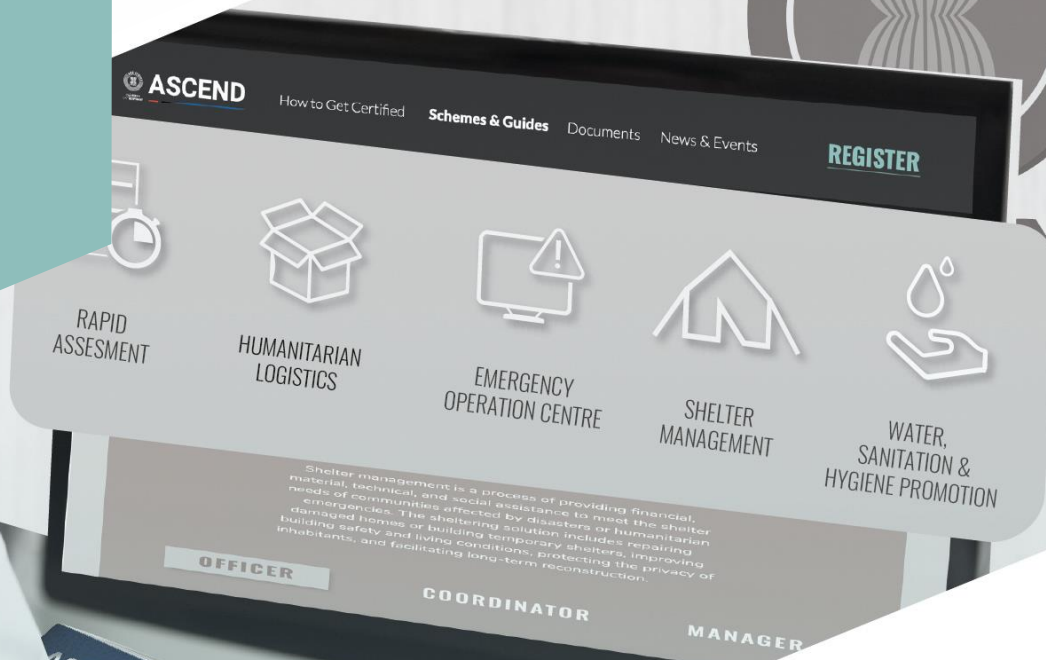
The ASCEND Toolbox documents can assist the ASEAN Member States to identify, build the capacity of, and mobilise competent disaster managers across Southeast Asia to help reduce disaster risks and disaster losses in the region through timely and effective response. These documents may also serve as a reference for ASEAN Member States seeking to develop and implement national-level competency-based certification processes based on their respective capacities and needs.

Figure 1: Overview of ASCEND Toolbox Documents





# ASCEND Certification Schemes: Overview



## 2.1

# Purpose and Aims

The purpose of the ASCEND Certification Schemes is to describe the process for admitting, assessing, certifying, registering, and tracking candidates and certificate holders pursuing or maintaining an ASCEND certification in a particular disaster management profession and occupation. It aims to assist ASCEND assessors and the ASEAN Member States in enhancing the capacities and quality of work of disaster management professionals by providing a model for validating and evaluating their learning and development against regionally recognised qualifications and competencies.

The Certification Schemes also help ASCEND assessors and the ASEAN Member States ensure that candidates for certification have the experience and ability to use or apply knowledge and skills-sets to perform critical work functions in their chosen occupation in the disaster management sector. It outlines the ASCEND competencies under selected professions and occupations, requirements, rights of candidates, and obligations of certification holders.

## 2.2

# Scope

There are fifteen (15) ASCEND Certification Schemes, one document for each disaster management profession-occupation combination. Please see a summary in Table 1. The certification levels of ASCEND occupations align with the Level Descriptors in Section 3 of the ASEAN Qualifications Reference Framework or AQRF. The kind of work associated with each occupation and set of competencies required of disaster management professionals builds on the ASEAN Disaster Management Occupations Map.

**Table 1:** ASCEND Professions, Occupations, and AQRF Levels

ASCEND Professions	Occupations	AQRF Levels	Count
Humanitarian Shelter and Settlement	Manager	7	1
Water, Sanitation and Hygiene (WASH)	Manager	7	1
Information Management	Manager	7	1
Humanitarian Logistics	Manager	7	1
Humanitarian Shelter and Settlement	Coordinator	6	1
Water, Sanitation and Hygiene (WASH)	Coordinator	6	1
Information Management	Coordinator	6	1
Humanitarian Logistics	Coordinator	6	1
Rapid Assessment	Coordinator	6	1
Humanitarian Shelter and Settlement	Officer	5	1
Water, Sanitation and Hygiene (WASH)	Promoter	5	1
Water, Sanitation and Hygiene (WASH)	Engineer	5	1
Information Management	Officer	5	1
Humanitarian Logistics	Officer	5	1
Rapid Assessment	Officer	5	1
<b>Total</b>			<b>15</b>

The AQRF Level Descriptors show the hierarchy of the complexity of learning outcomes of ASCEND occupations and define the differences in basic (officer/engineer/promoter-level), intermediate (coordinator-level), and advanced (manager-level) competencies. The Level Descriptors also provide a reference point for linking the ASCEND certification to the national qualifications framework (NQF) and facilitating comparisons of qualifications and certification systems across the ASEAN Member States.

AQRF levels have two domains: (i) knowledge and skills and (ii) application and responsibility. In line with this, the ASCEND Competency Standards and Toolbox Documents incorporate four kinds of competencies:

- Cognitive competence: Tacit knowledge gained through experience and explicit knowledge of concepts, facts, and theories acquired through formal education
- Functional competence: Know-how or skill of a person to apply their knowledge to function in a given work setting
- Personal competence: Knowing oneself and how to appropriately conduct oneself in specific situations to be able to perform a job
- Ethical competence: To know what professional values are essential and uphold those values in challenging conditions

## 2.3

### Basis and Framework

The primary basis of the Certification Schemes includes the ASCEND Framework and the ASCEND Competency Standards, which draw from and build on the reference documents below. ASCEND Toolbox Documents closely align with ASEAN policies and developments relevant to the Southeast Asian context and supplement existing international agreements.

- ASEAN Agreement on Disaster Management and Emergency Response ([AADMER](#)) 2009
- Declaration on One ASEAN One Response ([OAOR](#)) 2016
- ASEAN Agreement on Disaster Management and Emergency Response (AADMER) [Work Programme](#) 2021-2025
- ASEAN Qualifications Reference Framework ([AQRF](#))
- ASEAN Guiding Principles ([AGP](#)) for Quality Assurance and Recognition of Competency Certification Systems
- ASEAN Disaster Management Occupations Map
- ASEAN Community [Vision](#) 2025
- ASEAN Economic Community [Blueprint](#) 2025
- [Sendai Framework](#) for Disaster Risk Reduction 2015-2030

Please refer to the ASCEND SOP for Certification for more information about how the Toolbox Documents link to these reference documents.

## 2.4

# 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, Water, Sanitation and Hygiene (WASH), and Humanitarian Shelter and 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 core and technical competency unit has its dedicated Assessor Guide, Trainer Guide, and Learner Guide. 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.

Each profession-occupation combination has its own Certification Scheme, which outlines the eligibility criteria, basic requirements and rights of candidates, the ASCEND competency units required for each profession and occupation, and obligations of certification holders. Only one SOP applies to all profession-occupation combinations covered by the ASCEND certification. The Certification Schemes and the SOP 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 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 field and maintains its relevance. Table 2 describes the main components of the ASCEND Competency Standards.

*Table 2: Components of the ASCEND Competency Standards*

Component	Description
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<b>Unit title</b>	Describes the critical work function to be performed in an occupation.
<b>Unit number</b>	<p>A coding system to organise the units of competency. It also indicates the types of competency standards.</p> <ul style="list-style-type: none"> <li>• ADM.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.</li> <li>• 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.</li> </ul>
<b>Unit description</b>	Provides information about the critical work function covered by the unit.
<b>Elements</b>	Presents the occupational tasks required to perform the critical work function in the unit.
<b>Performance criteria</b>	Lists the expected outcomes or results from the occupational tasks to perform and the standard required.
<b>Unit variables</b>	Advises on how to interpret the scope and context of this unit of competence.
<b>Assessment guide</b>	Outlines the evidence to gather and evaluate to determine whether the candidate is competent in the unit.
<b>Linkages to other units</b>	Explains the connection of the competency standard to other units of competency.
<b>Critical aspects of assessment</b>	Lists the types of evidence or demonstrated abilities assessors need to observe to determine the candidate's competency.

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<b>Context of assessment</b>	Notes the settings or situations in which candidates need to demonstrate their ability during ASCEND assessments.
<b>Context of assessment</b>	Identifies the resources needed to conduct the assessment.
<b>Assessment methods</b>	Describes the different assessment methods to assess the competency of candidates in the specific unit.
<b>Key competencies</b>	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.

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The purpose of this segment is to assist the ASCEND Secretariat or Authorised/Licensed Certification Institutions, ASCEND assessors, and candidates for ASCEND certification in ensuring that:

- Candidates pursuing WASH Engineer certification meet the regionally recognised qualifications and competencies defined in the ASCEND Competency Standards.
- Certificate holders continue to uphold the standards in which they are certified.

Candidates pursuing certification for WASH Engineer need to satisfy the requirements of candidates for certification and complete all assessments associated with the ASCEND core and technical standard competencies of their chosen profession and occupation. The following sections describe these, including the rights of candidates for certification and obligations of certificate holders.

## 3.1

# Overview of ASCEND WASH Engineer

<b>Profession and occupation title</b>	ASCEND WASH Engineer
<b>ASCEND certification level</b>	Level 5 Engineer
<b>Expected level of work experience</b>	With a minimum of two (2) years of relevant work experience similar to the “Application and Responsibility” descriptors of the <a href="#">AQR</a> Level 5
<b>Expected level of deployment experience</b>	With a minimum of one (1) emergency response deployment performing the role of WASH engineer
<b>General description of the profession</b>	Water, Sanitation and Hygiene or WASH in humanitarian and disaster response contexts provide affected communities access to clean potable water, adequate sanitation utilities, and promotion of good hygiene practices that reduce environmental health risks and prevent disease outbreaks.

## 3.2

# Competency Standards in Scope

The competency unit codes and titles in Table 3 are the references that detail the experience, knowledge, skills, and attitudes (KSAs) that applicants or prospective candidates for certification need to demonstrate to show that they can perform well in their chosen occupation in the disaster management sector. Each competency unit listed below has a competency-specific Assessor Guide, Trainer Guide, and Learner Guide. The first sections of the ASCEND SOP for Certification and this document provide more information about the nature of these Guides.

Candidates must familiarise themselves with the contents of the relevant Learner's Guides before applying for certification. The ASCEND Secretariat will also conduct a briefing to explain the certification process, assessment methods, and learning approach to eligible candidates.

**Table 3:** ASCEND Competency Standards in Scope

Type of competency	Unit Code	Unit Title
Core	ADM.COR.001.2	Apply the core humanitarian standard and principles
Core	ADM.COR.002.2	Identify ASEAN disaster management and humanitarian assistance legal framework and institutional arrangement
Technical	ADM.TEC.028.2	Provide technical guidance on core public health engineering concepts
Technical	ADM.TEC.029.2	Capable to work with the affected community for WASH programme
Technical	ADM.TEC.030.2	Monitor an ongoing WASH programme

**3.3**

## Basic Requirements of Candidates for Certification

Prospective candidates for certification must satisfy all the basic requirements listed below to be eligible for ASCEND certification. ASCEND certificate-issuing institutions are responsible for collecting, reviewing, and counter-checking the accuracy and validity of the supporting documents presented by prospective candidates. Please see the ASCEND SOP for Certification for details about activities, actors, and actions involved in candidate application for certification and admission.

Prospective candidates should be/have:

- Able to travel to the assessment venue and complete all the requirements of the assessment process
- Comprehension of working-level English  
The assessment process, including all documents, tests, and interviews, will be conducted fully in English. Thus, candidates are expected to be proficient in working-level reading, writing, and speaking English.
- Work experience: Entry-level professional with basic knowledge and skills and a minimum of two (2) years of relevant work experience in humanitarian or disaster management WASH-related job functions, similar to the “Application and Responsibility” descriptors of the AQR Level 5
- Deployment experience: Must have at least one (1) emergency response deployment performing the role of WASH engineer

**3.4**

## Rights of Candidates for Certification

- Right to be awarded the certification after completing assessments and deemed “competent” in all the core and technical competencies of their chosen profession and occupation
- Right to appeal the assessment results and recommendations and request for re-assessment if deemed as “not yet competent” – subject to the final decision of the ASCEND Secretariat
- Right to use the certification to promote themselves professionally and as evidence of their qualifications as a WASH Engineer

**3.5**

## Obligations of Certificate Holders

- Act according to ASCEND competency standards, disaster management professional ethics, ASEAN values, and humanitarian codes of conduct.
- Abide by the rules, regulations, and requirements set by ASEAN and its Member States.
- Agree not to make any misleading or unauthorised statements about the certification, not misuse the certificate in such a manner that is against the applicable laws and regulations or may damage the AHA Centre / ASEAN reputation.
- Agree not to present themselves falsely as an AHA Centre / ASEAN representative through the ASCEND certificate.
- Acknowledge the certification and all associated marks or logos are the property of the AHA Centre / ASEAN and agree not to misuse the AHA Centre / ASEAN / ASCEND logos or certificates.
- Agree to discontinue the use of all references to their ASCEND-certified status should their certification be suspended or withdrawn and agree to return the certificate if the certified status is revoked.
- Should they face any uncertainties in implementing the statements above, or upon identifying any violations thereof, they shall notify the AHA Centre to seek further guidance and appropriate measures.

**3.6**

## Certification Fee and Costs

The certification fee is currently not in effect. In the future, certification fee may apply, and it will not include candidate's transportation, accommodation, and other expenses.



ASCEND Certification Scheme:

# Process



## 4.1

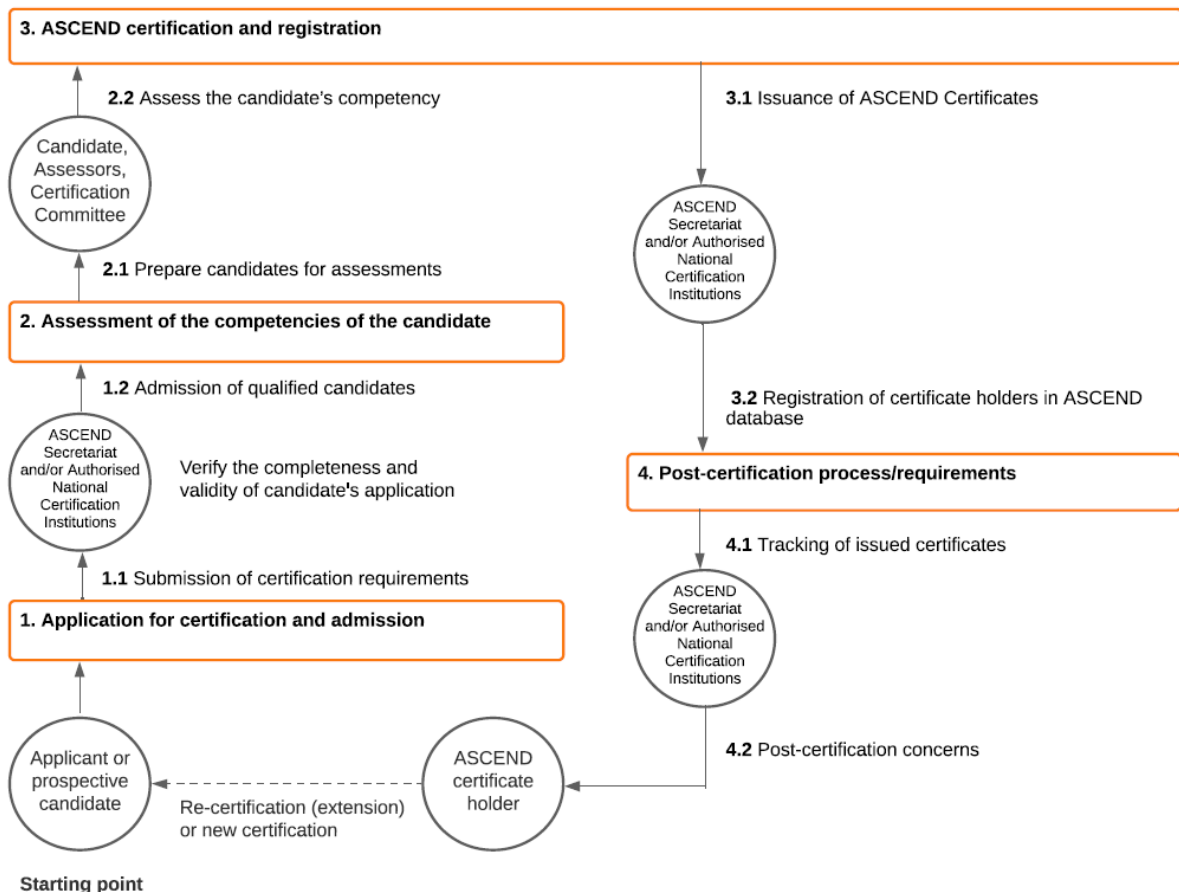
# Summary of the Certification Process

The figure below illustrates and summarises the main stages of the certification process.

**For ASCEND Secretariat or Authorised or Licensed Certification Institutions and Assessors:** Please refer to the ASCEND SOP for Certification for a more detailed activity-based workflow chart and the comprehensive guidelines for implementing the certification.

**For candidates:** The section below provides useful information about the general sequence of activities and actors involved in the ASCEND certification.

*Figure 2: Main stages and activities of the certification process*





# ASCEND

ASEAN Standards and Certification for Experts in Disaster Management

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