



# Abu Dhabi Occupational Safety and Health System Framework (ADOSH-SF)

Code of Practice

CoP 45.0 – Underwater Activities

Version 4.0

July 2024

## Table of Contents

1. Introduction .....	3
2. Training and Competency .....	4
3. Requirements.....	6
3.1 Roles and Responsibilities.....	6
3.2 Planning and Assessment.....	7
3.3 Recreational Diving Operations and SCUBA Diving Training Centers .....	8
3.4 Commercial Diving Operations .....	10
3.5 Cylinders and Compressed Air .....	13
3.6 Warning Notices and Signals .....	14
3.7 Safety of Navigation .....	15
4. Record Keeping .....	17
5. Document Amendment Record.....	18

## 1. Introduction

- (a) This Code of Practice (CoP) applies to every place of employment within the waters of Abu Dhabi, UAE. It covers all diving and related support operations conducted in connection with all types of work and employments, including general industry, construction, recreational diving, commercial diving, ship repairing, shipbuilding, ship-breaking, and long-shoring.

## 2. Training and Competency

- (a) Employers shall ensure that OSH training complies with the requirements of:
  - (i) *ADOSH-SF - Element 5 - Training, Awareness and Competency.*
  - (ii) *ADOSH-SF - Mechanism 7.0 - Occupational Safety and Health Practitioner and Service Provider Registration.*
- (b) Employers shall ensure all relevant employees and other persons have:
  - (i) appropriate training to ensure they acquire the understanding, knowledge, and skills necessary for the safe performance of all duties;
  - (ii) valid Commercial Diving Certification if they perform underwater work that includes, but is not limited to welding, pipeline construction and/or repair, rig construction and/or repair, bridge construction and/or repair, or other similar activities;
  - (iii) a valid Commercial Diving Certification if they collect criminal evidence or scientific samples, locate bodies, and/or photograph or film underwater.
  - (iv) a valid diving qualification/certification from one of the following, or equivalent, diving organizations if they are providing recreational diving services or instruction:
    - 1. Professional Association of Diving Instructors (PADI);
    - 2. British Sub-Aqua Club (BSAC);
    - 3. Sub-Aqua Association (SSA); or
    - 4. SCUBA Schools International (SSI).
  - (v) diving qualifications/certifications and training equivalent to the depth of the dives performed and operations performed while diving;
  - (vi) training on risks associated with activities they will perform;
  - (vii) training on control measures implemented to address identified risks;
  - (viii) annual refresher training on the employer's Occupational Diving Program;
  - (ix) training on what work can and cannot be performed while diving; and
  - (x) specific emergency procedures to follow if an incident occurs.
- (c) Employers are to ensure managers and supervisors of Diving Operations shall have:
  - (i) a valid Commercial Diving Certification and training equivalent to the work being performed if they manage or supervise commercial diving operations;
  - (ii) the following minimum qualification/certification, or equivalent, if providing recreational diving services:
    - 1. PADI - Dive Master;
    - 2. BSAC - Advanced Diver;
    - 3. SSA - Dive Supervisor;
    - 4. SSI - Dive Control Specialist; or
    - 5. equivalent from a recognized diving organization.

- (iii) diving qualifications/certifications equivalent to the depth of the dives performed and operations performed while diving;
  - (iv) current first aid training in accordance with SCUBA diving certification requirements and ADOSH-SF - CoP 4.0 - First Aid and Medical Treatment;
  - (v) training on risks associated with tasks their staff will perform;
  - (vi) training on control measures implemented to address identified risks;
  - (vii) annual refresher training on the employer's Occupational Diving Program;
  - (viii) training on what work can and cannot be performed while diving; and
  - (ix) specific emergency procedures to follow if an incident occurs.
- (d) Divers shall have:
- (i) a valid Commercial Diving Certification and training equivalent to the work being performed if they manage or supervise commercial diving operations; and
  - (ii) a valid diving qualification/certification when providing recreational diving services from one of the following, or equivalent, recognized diving certification organizations:
    - 1. PADI;
    - 2. BSAC;
    - 3. SSA; or
    - 4. SSI.

### 3. Requirements

#### 3.1 Roles and Responsibilities

##### 3.1.1 Employers:

- (a) Employers shall undertake their roles and responsibilities in accordance with the general requirements of *ADOSH-SF - Element 1 - Roles, Responsibilities and Self-Regulation* Section 3.2.5.
- (b) Employer shall be responsible for performing a risk assessment in accordance with *ADOSH-SF - Element 2 - Risk Management* to determine the risks associated with dive activities and develop an Occupational Diving Program that implements the appropriate control measures.
- (c) Employers shall ensure that there are appropriate divers who are competent in both diving and the actual work to be undertaken and possess valid diving certifications as required by this CoP.
- (d) Employers shall ensure that diving operations shall not take place without a competent appointed diving supervisor.
- (e) Employers shall provide appropriate plant and equipment and ensure that it is correctly certified and maintained.
- (f) Employers shall ensure all divers have a medical evaluation to assess their fitness to perform work prior to starting work and annually thereafter. Medical evaluations shall be performed by a physician familiar with the hazards of diving operations (e.g. HSE - UK - Approved Physician).
- (g) Employers shall maintain insurance coverage for all divers that shall cover treatment of injuries and illnesses associated with underwater activities, to include medical evacuations and treatment of decompression illnesses.
- (h) Employers shall implement the employer's Occupational Diving Program which includes reviewing risk assessments and consulting their staff to ensure all relevant hazards are identified and appropriate control measures are implemented.
- (i) Employers shall assess divers prior to any operations for obvious changes in their medical fitness, if such changes have occurred; they shall not allow the diver to perform work until assessed and found fit by a medical professional.
- (j) Employers shall ensure there are appropriate arrangements for firefighting on-board vessel(s).
- (k) Employer shall ensure there are appropriate arrangements for recovery of injury divers, first aid and medical treatment, including contract or service agreement with medical facilities with the appropriate specialist hyperbaric medical equipment and practitioners.
- (l) Employers shall ensure that diving project logbooks (including required stamp) / records are appropriately maintained.

- (m) Employers shall ensure everyone in the diving operation is aware of the diving project plan, and that the plan is kept up to date.
- (n) Employers shall ensure there is appropriate communication with the divers in the water.
- (o) Employers shall check the site on the day of the dive, and when conditions change, confirm that the risk assessment is still current.

### 3.1.2 Employees

- (a) Employees shall undertake their roles and responsibilities in accordance with the general requirements of *ADOSH-SF - Element 1 - Roles, Responsibilities and Self-Regulation* Section 3.2.7.
- (b) Employees shall report any activity or defect relating to underwater activities which they believe is reasonably foreseeable to endanger their safety or that of another person.
- (c) Employees shall use appropriate equipment or safety devices provided for underwater activities by the employer in accordance with any training or instruction received in the use of the work equipment or device concerned.
- (d) Employees shall hold an approved qualification and experience for the diving operations.
- (e) Employees shall have a valid certificate of medical fitness to dive.
- (f) Employees shall maintain a daily logbook / record of their dives, which shall be kept for a minimum of five (5) years.
- (g) Employees shall follow the requirements of their employers Occupational Diving Program and maintain their diving certifications.

### 3.2 Planning and Assessment

- (a) Employers shall ensure the following:
  - (i) an assessment of the various risks is undertaken, and systems of work are established which are safe to all parties involved or affected including the public;
  - (ii) that appropriate control measures are implemented in order to manage activities safely and without risk to health.
  - (iii) that for the Building and Construction Sector the management of underwater activities requirements are included in the Pre-Tender Safety and Health Plan in accordance with *ADOSH-SF - CoP 53.0 - OSH Management During Construction Work*; and
  - (iv) that associated safe systems of work, and site rules are included in the Safety and Health Construction Management Plan (OSH-CMP) in the case of the Building and Construction Sector in accordance with *ADOSH-SF - CoP 53.0 - OSH Management During Construction Work*.

### 3.3 Recreational Diving Operations and SCUBA Diving Training Centers

- (a) Employers shall perform a risk assessment in accordance with *ADOSH-SF - Element 2 - Risk Management*, to determine the risks, control measures and training requirements for employees performing diving and instruction operations.
- (b) Recreational Diving Operations and SCUBA Diving Training Centers shall maintain active membership with the Emirates Diving Association (EDA).
- (c) Recreational Diving Operations and SCUBA Diving Training Centers shall maintain current permit(s) and license(s) as required by the relevant authorities as well as any other permits and licenses as required.
- (d) Recreational Diving Operations and SCUBA Diving Training Centers shall meet the following international standard requirements:
  - (i) recreational scuba diving businesses shall meet the requirements of ISO 24801-3:2014, Recreational Diving Services - Requirements for recreational scuba diving service providers.
  - (ii) assistant scuba diving Instructors shall meet the requirements of ISO 24802-1:2014, Recreational Diving Services - Safety related minimum requirement for the training of scuba instructors - Part 1: Level 1.
  - (iii) scuba diving instructors shall meet the requirements of ISO 24802-2:2014, Recreational Diving Services - Safety related minimum requirements for the training of scuba instructors - Part 2: Level 2.
  - (iv) scuba divers using enriched air shall meet the requirements of ISO 11107:2009, Recreational Diving Services - Requirements for training programs on enriched air nitrox (EAN) diving; and
  - (v) managers and supervisors of scuba diving operations shall meet the requirements of ISO 24801-3:2014, Recreational Diving Services - Safety related minimum requirements for the training of recreational scuba divers - Part 3: Level 3 - Dive Leader.
- (e) Employers that have recreational diving operations shall develop an Occupational Diving Program that shall at a minimum consist of the following:
  - (i) training for new employees, and refresher training as required.
  - (ii) process to ensure employees have been appropriately trained and maintain valid diving qualifications/certifications.
  - (iii) communication system to inform/remind employees of the hazards of diving operations and control measures that shall be implemented to reduce identified risks.
  - (iv) pre-work assessment and job briefings that shall review work procedures to ensure all risks have been identified and appropriately controlled.
  - (v) identify emergency procedures and contact information for emergency services, medical clinics, hospitals, Coast Guard, and a physician that is competent and capable of treating diving and decompression related injuries and illnesses.

- (vi) reporting and investigation of incidents occurring during diving operations as required by *ADOSH-SF- Mechanism 11.0 - Incident, Notification, Reporting and Investigation*.
- (vii) medical monitoring / surveillance program to ensure no medical condition exists that makes employees unsuitable for performing recreational diving and instruction work.
- (viii) process for logging dives and maintaining safe diving operations as specified by a professional diving organization (e.g. PADI or BSAC); and
- (ix) process for maintaining, testing, and servicing all diving equipment.
- (f) Work shall be planned so that employees do not work alone and medical assistance is available when required while performing diving activities.
- (g) Employers shall select one professional diving organization that their occupational diving operations shall adhere to and follow the requirements set by that organization. All divers shall maintain qualifications/certifications from that organization. New employees with qualifications/certifications from another organization shall have six months to obtain the qualifications/certifications from the employer selected professional organization, but they shall have equivalent qualifications for the work and depth of dives they will be performing for the employer.
- (h) Any diving operations deeper than 35 meters, the employer shall ensure:
  - (i) employees and managers/supervisors performing the dive operations have the equivalent commercial and/or technical dive certification/qualification for performing the dives;
  - (ii) that all divers have the appropriate equipment to safely perform diving operations. They shall also ensure all breathing gases have been tested to ensure they meet required specifications as set by the professional diving organization's standards they are following; and
  - (iii) a decompression chamber or bell, with qualified medical staff, is available within one hour of the dive operations.
- (i) The maximum depth for recreational diving is 40 meters. Any diving operations deeper than 40 meters shall follow the requirements for commercial diving operations.
- (j) All diving equipment shall be maintained to manufacturer's requirements.
- (k) The minimum qualification/certification for the senior diver on a dive boat that is providing recreational dive services shall be:
  - (i) PADI - Dive Master;
  - (ii) BSAC - Advanced Diver;
  - (iii) SSA - Dive Supervisor;
  - (iv) SSI - Dive Control Specialist; or
  - (v) equivalent from a recognized diving organization.

- (l) Personal Protective Equipment provided shall be in accordance with *ADOSH-SF - CoP 2.0 - Personal Protective Equipment*; including specialized diving equipment (eg. wetsuits, diving knife, etc).

### 3.4 Commercial Diving Operations

(a) Employers shall:

- (i) perform a risk assessment in accordance with *ADOSH-SF- Element 2 - Risk Management*, to determine the risks and training requirements for employees performing diving operations;
- (ii) have membership in and follow the practices of the International Marine Contractors Association (IMCA) or any equivalent membership of an internationally recognized organization (HSE-UK, Association of Diving Contractors, etc);
- (iii) shall maintain current permit(s) and license(s) as required by the Department of Transportation - Maritime, Department of Economic Development as well as any other permits and licenses as required;
- (iv) require all diving operations to be carried out under appropriate work procedures along with performing a task specific risk assessment; and
- (v) identify a Competent Person for Diving Operations in writing.

(b) Competent Person for Diving Operations shall:

- (i) ensure competency of divers and diving contractors;
- (ii) coordinate with diving team operations and prepare plans for diving operations;
- (iii) ensure diving operations are in accordance with the CoP and team diving plans; and
- (iv) ensure that divers update and maintain their personal dive logbooks at the end of each day.

(c) Facility/Site Manager or Ships Master shall:

- (i) ensure that all interfaces are identified, the risks analysed and actions taken to mitigate risks. Such interfaces resulting from concurrent activities include:
  - 1. over side lifting, scaffolding or any other work that may cause objects to drop in the diving zone;
  - 2. over side disposal of effluent and/or waste (eg. drilling mud/cuttings);
  - 3. ship movements in the vicinity of diving location;
  - 4. testing of fire fighting facilities (eg. start-up of fire pumps); and
  - 5. special operations that may cause accidental loss of containment in the vicinity of the diving operations. (eg. pressure testing of subsea pipe work, testing of subsea Emergency Shutdown Valves (ESDs).
- (ii) ensure that, where reasonably practicable, concurrent operations are avoided. However, if avoiding these is not an option, then Permit To Work (PTW) control measures requirements shall be strictly applied;

- (iii) inform the Competent Person for Diving Operations of the location and exact operational details of all interface items in writing and in appropriate time to account for them in the risk assessments;
  - (iv) provide the Competent Person for Diving Operations in writing with details of any substances that are reasonably practicable to be encountered by the diving team that would be hazardous to their health;
  - (v) ensure appropriate lifting equipment is available, in compliance with ADOSH-SF - CoP 34.0 - Safe use of Lifting Equipment and Lifting Accessories; and
  - (vi) ensure that the competent Person of Diving Operations is kept informed of any changes that may affect the diving operation.
- (d) Divers shall:
- (i) hold a diving qualification appropriate for the work they intend to do. They shall have the original certificate in their possession at the site of the diving project - copies are not acceptable; and
  - (ii) maintain one of the following qualifications, or an equivalent qualification:
    - 1. Scuba Diving to 30 meters - *ADAS Part 1 (AS2815.1)*;
    - 2. Surface Supply to 30 meters - *ADAS Part 2 (AS2815.2)*;
    - 3. Surface Supply to 50 meters - *ADAS Part 3 (AS2815.3)*; and
    - 4. Bellmen and lockout divers - *ADAS Part 4 (AS2815.4)*.
- (e) Before the commencement of a diving project, the employer shall develop a diving project plan that is updated as necessary during the diving operations if conditions change or new hazards are identified. At a minimum, the diving project plan shall:
- (i) include written appointment of a competent person to supervise the operation that is appropriately qualified to perform the functions of diving supervisor;
  - (ii) list the risks identified during the risk assessment and control measures that will be taken to remove or control the risks to an as low as reasonably practicable level;
  - (iii) cover the general principles of the diving techniques to be used as well as the needs of the particular operation;
  - (iv) identify emergency procedures and contact information for emergency services, medical clinics, hospitals, Coast Guard, and experienced / competent physicians;
  - (v) include procedures for checking and testing air quality of compressed air used in diving operations; and
  - (vi) include communication procedures during diving operations to include how divers shall communicate with other divers and personal overseeing operations at the surface.
- (f) Commercial diving operations shall meet the following international standard requirements:
- (i) scuba divers using enriched air shall meet the requirements of ISO 11107:2009, Recreational Diving Services - Requirements for training programs on enriched air nitrox (EAN) diving; and

- (ii) managers and supervisors of scuba diving operations shall at a minimum meet the requirements of ISO 24801-3:2014, Recreational Diving Services – Safety related minimum requirements for the training of recreational scuba divers – Part 3: Level 3 – Dive Leader.
- (g) Employers that have commercial diving operations shall develop an Occupational Diving Program that shall at a minimum consist of the following:
  - (i) training for new employees, and refresher training as required;
  - (ii) process to ensure employees have valid diving qualifications/certification;
  - (iii) communication system to inform/remind employees of the hazards of diving operations and the required control measures they shall implement to reduce identified risks;
  - (iv) pre-work assessment and job briefings that shall review work procedures to ensure all risks have been identified and appropriately controlled;
  - (v) procedures for emergency response or medical treatment if an incident occurs to include identifying a physician that is familiar with and capable of treating decompression illnesses;
  - (vi) reporting and investigation of incidents occurring during diving operations as required by *ADOSH-SF- Mechanism 11.0 – Incident Notification, Investigation and Reporting*;
  - (vii) medical monitoring / surveillance program to ensure no medical condition exists that makes employees unsuitable for performing commercial diving operations;
  - (viii) process for logging dives and maintaining safe diving operations as specified by a professional diving association; and
  - (ix) process for maintaining, testing, and servicing all diving equipment.
- (h) Work shall be planned so that employees do not work alone and medical assistance is available when required while performing diving activities.
- (i) Any diving operations deeper than 35 meters, the employer shall ensure:
  - (i) employees and managers/supervisors performing the dive operations have the equivalent commercial and/or technical dive certification/qualification for performing the dives;
  - (ii) that all divers have the appropriate equipment to safely perform diving operations. They shall also ensure all breathing gases have been tested to ensure they meet required specifications as set by the professional diving organization's standards they are following; and
  - (iii) a decompression chamber or bell, with qualified medical staff, is available within one hour of the dive operations, except where a decompression chamber is required on site as specified below.
- (j) Qualified medical staff and a decompression chamber capable of recompressing the diver at the surface to a minimum of 165 feet of salt water (fsw) shall be available within five minutes of the dive location (on-site) for:
  - (i) surface-supplied air diving to depth deeper than 100 fsw and shallower than 220 fsw; or

- (ii) mixed gas diving deeper than 150 fsw and shallower than 300 fsw; or
- (iii) diving outside the no-decompression limits shallower than 300 fsw.
- (k) Qualified medical staff and a decompression chamber capable of recompressing the diver at the surface to the maximum depth of the dive shall be available within five minutes of the dive location (on-site) for dives deeper than 300 fsw.
- (l) The decompression chamber shall be:
  - (i) dual-lock;
  - (ii) multi-place; and
  - (iii) equipped with:
    1. a pressure gauge for each pressurized compartment designed for human occupancy;
    2. a built-in-breathing-system with a minimum of one mask per occupant;
    3. a two-way voice communication system between the occupants and a dive team member at the dive location;
    4. a viewport; and
    5. illumination capability to light the interior.

### 3.5 Cylinders and Compressed Air

- (a) All cylinders and valves shall be inspected for serviceability prior to use. All cylinders shall have the inside of the cylinder visually inspected at a minimum annually and pressure tested at a minimum every five years and the date of pressure testing stamped on the cylinder.
- (b) Compressed air shall meet the requirements of the *Compressed Gas Association (CGA), Table 1, Level E Standards for Scuba Diving Air*.

### 3.6 Warning Notices and Signals

- (a) Diving signals shall be displayed in the most conspicuous position relative to the diving operation and visible to all vessels at all times. The area of the diving operation shall be clearly defined with the international "A" "Diver Below" (see Figure 1) and where applicable mast head lights (see Figure 2) or mast head symbols (see Figure 3) shall be used.
- (b) In no wind situations a rigid replica of the International Flag "A," with a minimum dimension one square meter shall be displayed adjacent to the diving site.

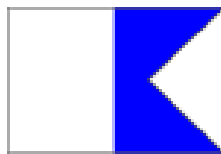
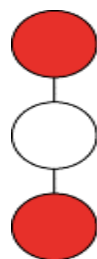


Figure 1: International Flag "A" (Diver Below)



Three all round lights, placed in line vertically, equally spaced at two metres. Top and middle lights to be RED, middle light to be White. These lights are to be lit when necessary.

Figure 2: International Mast Headlights



Three shapes, placed in line vertically, minimum diameters two feet, equally spaced at two metres. Top and bottom shape to be spherical and BLACK, middle shape to be diamond and BLACK.

Figure 3: International Mast Head Symbols

- (c) During conditions when a wind exists and a non-ridged International Flag "A" is displayed, the dimensions shall not be less than 750 millimetres in length and not less than 600 millimetres in width when displayed on a vessel and 300 millimetres in length and 300 millimetres in width when displayed from a buoy.
- (d) When using International Mast Headlights and International Mast Head Symbols, they shall be clearly visible for a distance not less than 200 meters.
- (e) When diving is taking place during the hours of darkness, a yellow or orange flashing light with a visibility of not less than 200 meters and visible to all vessels shall be used.

- (f) When diving operations occur from locations other than a vessel (eg. beach, bridge, platform, etc.) the following safety signage (see figure 4) shall be posted at all times and visible to all vessels within 100 meters. During diving activities, the International Flag "A" shall also be displayed.

	<p>Warning Sign Divers operating in area</p>	<p>تحذير منطقة نشاط الفوص</p>
---	--	---------------------------------------

Figure 4: Warning Sign

### 3.7 Safety of Navigation

- (a) Personal Flotation Devices of the appropriate size shall be made available to all personnel on the vessel (boat).
- (b) Vessels shall not exceed a speed of 6 knots when:
- (i) within 100 meters of any diving operations;
  - (ii) within 100 meters of a vessel or buoy on which a "diver below" signal corresponding to the international code flag "A" (figure 1) is displayed;
  - (iii) within 60 meters of a designated swimming area;
  - (iv) within 60 meters of a person in the water;
  - (v) within 60 meters of any fixed or floating structure, either on or in the water; except where that structure is an Aid to Navigation and the width of the Navigable Channel prevents such distance off to be maintained;
  - (vi) within 200 meters of the water's edge; and
  - (vii) passing through an arch of a bridge.
- (c) Operators of vessels shall have training on the appropriate operation of the vessel and associated rules and regulations on the safe operations of a vessel.
- (d) Operators of vessels shall have the appropriate training certificates and licenses as required by the Department of Transportation.
- (e) Employers with vessels shall comply with the requirements of the *Transport (Waterways Management) Code of Practice 2011*.
- (f) Vessels engaged in commercial underwater operations shall exhibit:
- (i) International Mast Headlights (Figure 2) or International Mast Head Symbols (Figure 3);

- (ii) two all-round red lights or two ball in a vertical line to indicate the side on which the diving operations are occurring; and
  - (iii) two all-round green lights or two diamonds in a vertical line to indicate the side on which another vessel may pass.
- (g) Whenever the size of a vessel engaged in commercial diving operations means it not reasonably practicable to exhibit all lights and shapes prescribed in Section 3.6(f), the following shall be exhibited:
- (i) three all-round lights in a vertical line where they can best be seen. The highest and lowest of these lights shall be red and the middle light shall be white; and
  - (ii) a rigid replica of the International Code Flag "A" not less than 1 meter in height and width shall be displayed and visible to all vessels at all times.

#### 4. Record Keeping

- (a) All medical evaluation records and training records shall be maintained in accordance with *ADOSH-SF - Element 9 - Compliance and Management Review*.
- (b) All diving logs, end of job reports, and associated paperwork shall be maintained for a minimum of five (5) years.
- (c) A log of equipment maintenance, servicing, and testing shall be maintained for a minimum of five (5) years.

## 5. Document Amendment Record

<i>Version</i>	<i>Revision Date</i>	<i>Description of Amendment</i>	<i>Page/s Affected</i>
4.0	15 <sup>th</sup> July 2024	<i>System acronym updated from OSHAD-SF to ADOSH-SF to accurately reflect document title</i>	Throughout
		<i>Change from OSHAD to ADPHC</i>	
		<i>Change of Logo</i>	
		<i>Minor editorial changes throughout the document without changing requirements.</i>	
		<i>Title of Mechanism 7.0 updated to ADOSH-SF - Mechanism 7- Occupational Safety and Health Practitioner and Service Provider Registration.</i>	
		<i>OSHAD-SF - Mechanism 8.0 - OSH Practitioner Registration deleted</i>	





امسح رمز الاستجابة السريعة لزيارة  
منصات التواصل الاجتماعي الخاصة بنا  
Scan the QR code to visit our social  
media platforms