



# CMAS

CONFÉDÉRATION MONDIALE  
DES ACTIVITÉS SUBAQUATIQUES

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WORLD UNDERWATER FEDERATION

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# CMAS ICE FREEDIVING SAFETY & LOGISTICS GUIDELINES FOR ICE RECORD ATTEMPTS

## Version 2021/01

## CA 212

CMAS Safety and logistics guidelines for freediving world record attempts under ice 2021/01

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## **2. List of minimum requirements for CMAS freediving world record attempts under ice**

### **2.1 Logistics**

- Video system
- Underwater drone (ex : diveye) following the athlete during all the performance, not mandatory only recommendation.
- Surface cameras to record start and surface exit protocol.
- Evacuation sled or similar ready to send a freediver in need to the closest hospital according to the evacuation plan

### **2.2 Required personnel in world record attempts under ice**

- Chief Judge
  - Head of logistical coordination with the help of competition organizer
  - Validate surface protocol and validity of the attempt
- Doctor
  - Doctor with CPR certification
  - Medical assistant
- Surface Camera Operator
  - Manage the official cameras to record surface and exit protocols
  - Download footage for judges
  - Charges all batteries and transport equipment to and from the dive site
- Safety free diver team composed of the necessary amount of freedivers (maximum distance to each safety diver to cover under ice must not exceed 20 m) plus an additional safety for safety diver's safety
  - Each safety free diver must have experience from under ice freediving

## **3. Logistics**

### **3.1 The track i.e. holes on the ice**

- The track has to be straight without any turns with a minimum depth of 5 meters. Maximum distance between the holes is 20 meters, which is also the maximum distance one safety diver can cover.

### **3.2 Safety lines**

- There must be two safety lines under the ice: one for the lanyard of the athlete and one for the lanyards of the safety divers. Use of a lanyard on every dive is mandatory.

### **3.3 Recovery**

- In case of a problem safety divers will escort the athlete to the nearest hole where more help will be available
- There must be one extra safety in wetsuit on the surface ready to dive in case the athlete needs help or the safety diver needs assistance.

### 3.4 Lanyard

- All personal lanyards must be between 80cm and 150cm long and weight less than 500g. The chief judge will systematically check the lanyard before the attempt (low quality velcro, carabiner difficult opening will not be accepted).

## 4. Personnel and responsibilities

The role of the Chief Judge is listed in the CMAS freediving under ice rules document available on [www.cmas.org](http://www.cmas.org) website.

### 4.1 Emergency Unit

#### 4.1.1 Medical Team

The medical assistance must guarantee the first aid interventions in case of accident by giving the athlete the aid necessary from the beginning of the accident until the reestablishment of conditions of health in the local health facilities. Communication of medical team to the doctor of local health facilities shall include the causes and circumstances of the accident occurring at the athlete.

The medical team is appointed by the organizer and they are responsible for controlling the event at the medical level. The medical team is made up of:

- One doctor (MD) who must be skilled, experienced with emergency treatment, equipped and capable to perform CPR (cardio-pulmonary resuscitation) as well as to provide first aid, who is responsible for the record attempt and is present during the diving, also responsible for checking the athletes medical certificate and giving the final ok to dive,
- An ambulance reserved for the record attempt, with a doctor on board, which must be located on land, closes possible place near the diving spot,
- An official hospital facility which must be easily accessible for the ambulance and aware of the evacuation plan of the record attempt

#### 4.1.2 List of equipment

- Medical equipment will be provided with the ambulance
  - **in any case minimum**
    - Manual suction
    - Double Evacuation Time supply of 100% Medical Grade Oxygen
    - Bag Valve Mask plus Resuscitation Bag
    - Oral Pharyngeal Airway Multiple Size Kit
    - Advanced Airway Kit (if the doctor is qualified) plus the emergency medication needed
  - Isolation mattress
  - Sleeping bag or similar on a sled or stretcher or similar
  - Covered, heated shelter close to the diving spot, also ambulance is sufficient if near enough.

#### 4.1.3 Evacuation Plan

An evacuation plan is almost as important as the doctor and should be well thought out and practiced to avoid confusion in an emergency situation. The evacuation plan should be extremely detailed to include a detailed route map, phone numbers to hospitals and ambulance services. Driving times from extraction site to advanced hospital care should be measured accurately and listed on the evacuation plan as well as alternative routes.

#### 4.2 Safety freedivers

All safety freedivers should be experienced freedivers having also experience freediving under ice.

##### 4.2.1 Equipment

- Exposure protection via wetsuit, socks and gloves in order to protect diver from cold.
- Ballast should be used to compensate for positive buoyancy near the surface. Safety diver must float with empty lungs.
- Each safety must use a lanyard and attach it to the safety line for safety divers while diving.
- Long blade fins are a recommended
- Safety diver should be using a small light. Under 10 m visibility it is mandatory.

##### 4.2.2 Safety freediver roles

Below are job descriptions for each member of the safety team

###### 4.2.2.1 Safety diver

- Will wait in the hole when the athlete is ready to start lanyard attached to the safety line for safety divers.
- Safety diver in the starting hole will follow the athlete after his start positioning himself right behind the athlete half a meter on the side that the athlete has enough space to work with his feet or fins.
- When the athlete passes the hole where the next safety diver is waiting, the next safety diver will follow the athlete and position himself as the first one did. The first safety diver will surface himself from the hole. This continues as many times as needed.
- In case of underwater black out safety diver will escort the athlete to the nearest hole to get more help at the surface. No rescue breaths will be given in water. Athlete must be helped out from the water as soon as possible and positioned to the rescue sled/stretchers.

###### 4.2.2.2 Additional safety

- Additional safety will be walking on the ice suited and ready to dive instantly when needed
- Responsible to assist a safety diver when the athlete needs help by helping to lift the athlete out from the water and positioning him to the rescue sled/stretchers.
- Responsible to check that every safety diver surfaces as planned after his task. If help needed informs the organiser and goes to water, attaches lanyard and helps the safety diver in need.

#### 4.2.3 Steps to blackout or LMC recovery

A blackout can be very intimidating for a safety diver and many times an overreaction will occur. The following steps should be taken to quickly promote the breathing response in the athlete.

1. Secure the airway above the water by providing lift under his armpit right after the judge calls "Grab".
2. Hand over the athlete to the medical team waiting on the ice. Medical team will be waiting by the hole and will help lifting the athlete from the water.
3. Remove the athlete's lanyard quickly that medical team can take the athlete to the rescue sled for treatment

#### 4.2.4 Media safety

Scuba diving by the media team should be approved by the Chief Judge and should be conducted using a strict "Buddy" system and is for certified ice divers only. At all cases everyone diving under ice must have a safety line or lanyard attached to one. The buddy system will also be used in the case of photographers' freediving to get images.

#### 4.2.5 Spectator security

Spectators must stay in designated areas outside the record attempt track area.