



CMAS

CONFÉDÉRATION MONDIALE
DES ACTIVITÉS SUBAQUATIQUES

WORLD UNDERWATER FEDERATION

UNDERWATER TARGET SHOOTING

CMAS RULES
Version 2023/01

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CMAS Underwater Target Rules

Version 2023/01

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1 Definition

Underwater Target Shooting is a sports discipline practised in a swimming-pool by an athlete who must hit a target with the arrow of a speargun, holding his breath underwater.

2 General Technical Aspects

2.1 Events

A competition may include three individual events (precision, biathlon, super-biathlon) and a relay with a team.

2.2 Categories

In order to take part in an Underwater Target Shooting competition, competitors must be at least 16 years old.

Men and women will have a separate ranking.

Relay teams may include both men and women.

2.3 Authorized equipment

- fins
- masks
- snorkels
- wetsuits
- weights
- gloves
- suction cup or ballast
- speargun
- positioning items.

The suction cup or ballast are items that allow the athlete to keep steady in front of the shooting spot (space A/B).

- The suction cup used to manipulate sheets of glass is appropriate to practising in a swimming-pool with a smooth lining such as stainless steel, or large tiles.
- The ballast is a handle that has been weighted in order to offer a steady point of anchor, and whose contact surface has been protected by a non-slip shock-absorbing lining.

The positioning elements are items that allow a visual control not to go beyond the shooting line.

Any other piece of item is prohibited, especially reels and torchlights.

2.4 Conformity control

The regularity of the speargun is checked at the beginning of the competition and may be verified again, upon request by the Competition Judge, with a shoot in the water.

2.5 Characteristics of the speargun

The gun must be mass-produced for underwater fishing, verifiable with a well-known recognizable brand, not altered or customized.

The spear, the line, the shockline, and the rubber bands of origin can be replaced by equivalent elements from another brand.

All sighting devices, whether mass-produced or custom-made, such as bow or rifle laser sights, fixed or adjustable, all optical sighting devices altering the visibility and all modifications to the structure of the gun that may be used as a sighting device are prohibited. Fins, counterweights, spear guides with fins, any support between the gun and the shooter's arm or the gun and the shooter's body as well as anatomical grips are prohibited.

2.5.1 Specificities for the 3-meter shooting

Spearguns for 3m shooting must not exceed the following standard dimensions:

- Maximum total length (from the rearmost point near the grip to the foremost point of the head of the arrow): **1600mm**.
- Maximum width, including any accessories: **80mm**.
- Maximum height, including any accessories but excluding the grip (handle, trigger, and release mechanism): **50mm**.
- Overall weight, excluding spear : **1500g**.
- Only mass-produced spear guides are allowed in the competition.
- Diameter of the body of the speargun : **28 mm** maximum.

The use of a shockline of a maximum length of 200mm is allowed.

2.5.1.1 Propulsion

Only the rubberbands are allowed to shoot the arrow: one pair of rubberbands tied to a single wishbone or circular rubberbands.

The gun must be loaded only with the strength of the arms.

2.5.1.2 The gun's body

Wooden spearguns are strictly prohibited.

No additional items that modify the weight and the buoyancy of the gun are allowed.

2.5.1.3 The spear

The length of the spear must not exceed **1500mm**.

The diameter must not exceed **7mm**.

The point of the arrow must be sharp enough to limit the size of the hole in the soft board of the target to the diameter of the spear itself, obeying the following measures:

- length of the cone : $\geq 11\text{mm}$
- angle of the cone : $\leq 30^\circ$

The spear must be attached to the body of the speargun by a line.

2.5.2 Specificities for the 4-meter shooting

Spearguns for 4m shooting must not exceed the following standard dimensions:

- Maximum width, including any accessories: **80mm**

- Maximum height, including any accessories but excluding the grip (handle, trigger, and release mechanism): **50mm**
- Overall weight, excluding spear: **1500g**

2.5.2.1 Propulsion

Spearguns with rubberbands or airguns may be used in the competition.

Roller spearguns are also allowed.

2.5.2.2 The gun's body

Only the mass-produced spear guides may be used.

2.5.2.3 The spear

The length of the spear must not exceed 1500mm.

The diameter must not exceed 8mm.

The point of the arrow must have a cone with an angle of 30° and must be cut to end up in a 4mm diameter tip.

Airguns must have an elastic line that must measure at least 1.80mm of diameter and that must be secured to the spear and the arrow in such a way as to prevent easy breakage.

2.6 Targets

2.6.1 Individual events

The target sheet must be a **30x30cm** square for 3m shooting, and a rectangle of **33x35cm** for 4m shooting with a white background. The target must be positioned **70cm** above the bottom of the swimming-pool for 3m shooting and **80cm** above for 4m shooting. This measurement corresponds to the center of the target, that is to say the center point of the first ring of the central target.

The target sheet includes five identical targets, each consisting of six (6) concentric circles, divided by a white line between two black circles, and a black line on the other cases, with the following values :

CENTRAL AXIS	DIAMETER	SCORE	COLOUR
1 st ring	1.2 cm	From 460 to 400 points	White
2 nd ring	3.2 cm	From 390 to 300 points	White
3 rd ring	5.2 cm	From 295 to 250 points	Black
4 th ring	7.2 cm	From 245 to 200 points	Black
5 th ring	9.2 cm	From 195 to 150 points	White
6 th ring	11.2 cm	From 145 to 100 points	White

The target sheet may be a sticker for 3m shooting and a clip for 4m shooting.

2.6.2 Relay

The target sheet for the relay is square and measures **30x30cm** for the 3m shooting and **33x35cm** for the 4m shooting, with a white background. It must be positioned so that the center of the central target, corresponding to 460 points, must be **70cm** (3m shooting) or **80cm** (4m shooting) above the bottom of the swimming-pool.

The target sheet is composed of 9 targets set in 3 lines and 3 columns, at an equal distance 2 by 2.

CENTRAL AXIS	DIAMETER	SCORE	COLOUR
1 st ring	1.2 cm	From 460 to 400 points	White
2 nd ring	3.2 cm	From 390 to 300 points	White
3 rd ring	5.2 cm	From 295 to 250 points	Black
4 th ring	7.2 cm	From 245 to 200 points	White

3 Competition zone

3.1 Swimming-pool

When the competition takes place in a swimming-pool, the pool must respect the following rules:

- Temperature of the water between 23°C and 33°C, the ideal temperature being 28°C.
- Minimum dimensions 10x25 meters with a depth between 1.8m and 3.5m for the shooting zone.

Potential exceptions may be allowed by the CMAS, according to the availability of the swimming-pools.

3.1.1 Organization of the competition zone

The competition area must be divided as follows:

Safety zone: water zone behind the targets where stopping or transit are strictly prohibited.

Competition zone: water zone dedicated to the sports events in progress.

Starting zone: water zone located before the competition zone and used by the athletes awaiting their turn in the competition.

Call zone: water zone located between the starting zone and the warm-up zone.

Warm-up zone: water zone dedicated to the athletes' warming-up before the competitions

Pre-Start zone: zone outside of the water where the athletes are meant to wait before they are allowed to have access to the swimming-pool.

3.1.2 Setting in the competition zone

A – Target line

B – Shooting line

C – Starting line

D – Border line of call zone

E – Warm-up zone

SPACE **A/B** (Shooting zone): **3 or 4 METERS** depending on the type of shooting

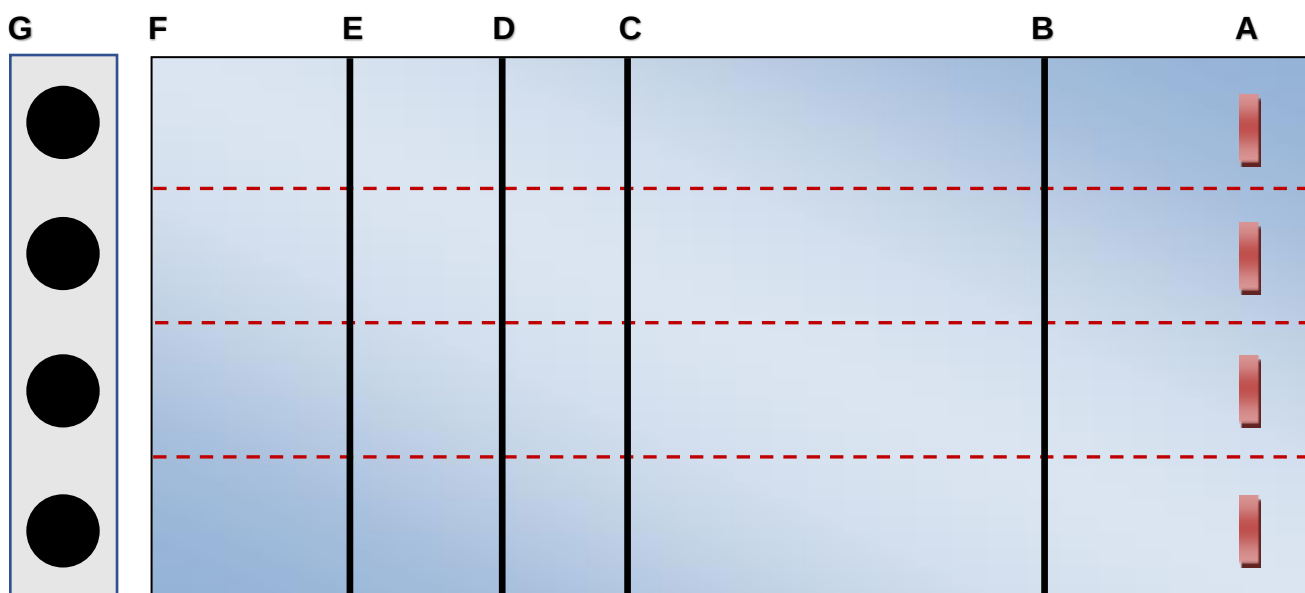
SPACE **B/C** (Preparation or Swimming zone): depending on the type of shooting and the event

SPACE **D/C** (Starting zone): **3 METERS**

SPACE **D/E** (Call zone): **3 METERS**

SPACE **E/F** (Warm-up zone – Rest of the pool)

SPACE **F/G** (Pre-start zone)



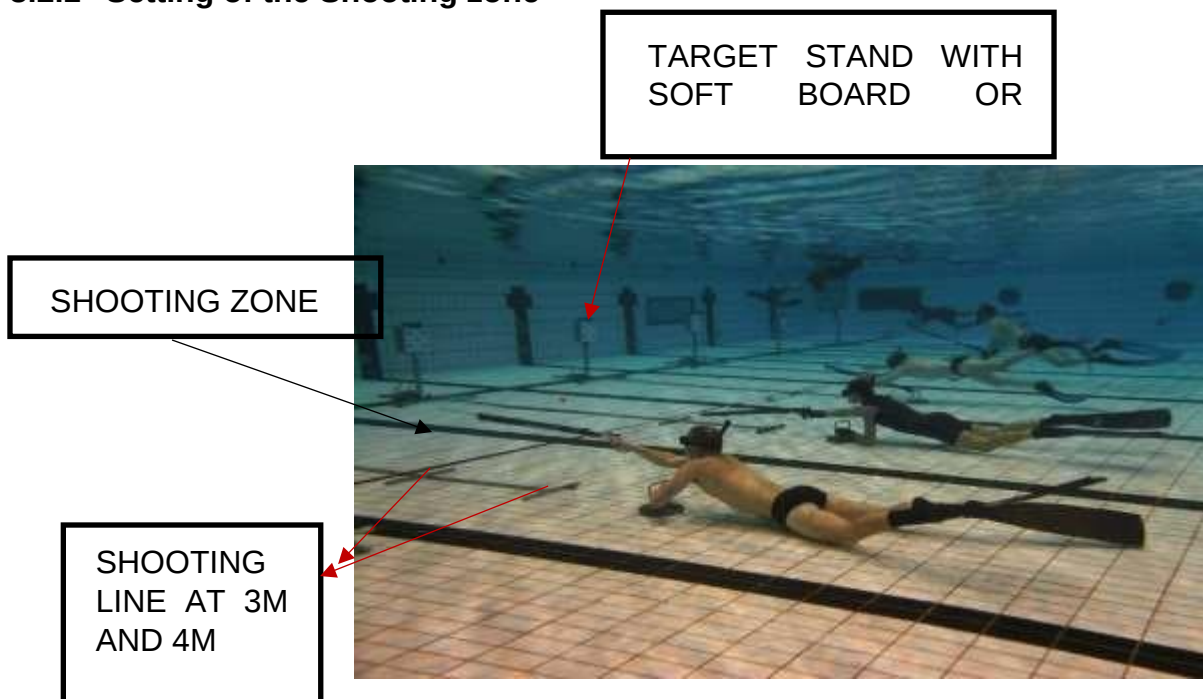
3.1.3 Prohibitions inside the competition zone

Loading the gun in any other part of the pool than the competition zone while an event is being performed, is strictly forbidden.;

Entering space C/D during the warming-up phase.

3.2 Target settings

3.2.1 Setting of the Shooting zone



3.2.2 3-meter shooting with a rubberband gun

- The point of the arrow must not go beyond the 3m shooting line when the trigger is pulled.
- When the spear is shot, it must penetrate the soft board of the target.
- The athlete must hold the target with one hand and use his other hand to take the spear out according to the axis of penetration after each shot.
- The impact of the arrow must leave a hole in the target.
- The center of the target must be 70cm above the bottom of the pool.

3.2.3 4-meter shooting with a rubberband gun or airgun

- The point of the arrow must not go beyond the 4m shooting line the moment when the trigger is pulled.
- The athlete is not allowed to enter the zone between the shooting line and the target line ([zone A/B](#)) during his run.
- The impact of the arrow leaves a trace on the target sheet and then falls on the bottom of the pool.
- The athlete gets his spear back by pulling on the line that secures it to the speargun.
- The use of a rubberband speargun is allowed as long as it is in compliance with the rules of the 3m shooting speargun, mentioned in §3.2.2.
- The center of the target sheet is 80 cm above the bottom of the pool.

4 Competition officials and staff

4.1 CMAS Technical Delegate

Refer to the chapter "Bodies of control during the competition" in the document "Championships organization – Procedures & obligations"

4.2 Competition Judges

The judges are fully responsible for the preparation and the technical process of the competition.

4.2.1 List of the competition judges

Competition judge	1
Starter judge	1
Shooting Line Judge	1
Judge checking the shots and awarding score	1
Timers	1 ou 2 for each lane
Competition Physician	1
Equipment Judge	1
Pre-start Judge	1

4.2.2 Competition Judge

In continental or worldwide championships, the competition judge is nominated by the CMAS.

The competition judge has authority and control over all the judges and other people that participate in judging.

The competition judge has the following responsibilities :

- Establishing the order of the program of the competition.
- He allows the Starter Judge to give the starting signal, after making sure that all the judging staff are correctly positioned and ready to fulfill their task.
- He may declare the start invalid and order a new starting procedure.
- The competition judge may apply a penalty on any athlete for any violation or irregularity that he observes personally or that has been referred to him by the other competition officials.

4.2.3 Shooting Line Judge

The Shooting Line judge must be positioned on the shooting line (so either 3m or 4m depending on the event) represented by a black line at the bottom of the pool and a floating line on the surface.

The shooting Line Judge controls the shooting line and reports the following situations to the competition judge:

- line crossings with the tip of the arrow or of the body
- number of shots
- any other violation of the rules that have been witnessed

- any unsporting behaviour

4.2.4 Judge checking the shots and awarding the score

He is in charge of checking on the shots and awarding the score.

He is in charge of the proper conservation of the target sheets until the end of the competition. He measures the shots and assigns the score by the use of the graduated scorecard.

The control must be done out of the water and only the captains or, if absent, the athletes, are allowed to attend the control and endorse the results.

4.2.5 Starter Judge

The starter judge is in charge of giving the starting signal when all athletes, judges and timers are in position, ready.

The starter is in charge of allowing the athletes to enter the call zone or leave the competition zone.

4.2.6 Timers

Each run is timed without interruptions from the start to the end with an accuracy of one tenth of a second.

For each run, the time starts when the starter gives the starting signal.

The time is stopped when the competitor raises his hand out of the water, beyond the starting line.

The time is recorded by the timers in minutes, seconds and tenths of a second.

The timer must count the number of shots and of runs done by the athletes and he must write them down.

When the timing is electronic, one timer for each lane is enough, otherwise two timers are necessary.

4.2.7 Equipment Judge

He is in charge of the control of the conformity of all the spearguns, of the targets and of all the positioning equipment (ballasts, suction cups, positioning items...).

4.2.8 Pre-start Judge

He is in charge of granting access to the athletes to the pre-start zone.

He makes sure that the athletes only get access to the pool when all the athletes of the previous run have cleared the warming-up zone.

4.2.9 Competition Physician

He is part of the competition officials.

He is in charge of all medical control. The presence of at least one physician is required for any underwater shooting competition.

He is responsible for all the sanitary, hygiene and medical issues (first aid in case of necessity, participation in preparing the timing of the competition, the menus, the sanitary control of all lodgings, checking the medical certificates, and the anti-doping tests, etc ...).

Before the start of each competition, he must check the good condition of all the necessary medical equipment.

A medical control may take place at any moment of the competition.

4.3 Competition staff with assistance duties

All the competition staff and officials are under the authority of the competition judge.

4.3.1 Competition Secretary

The Competition Secretary has the task of checking the accuracy of the notes written regarding the results and on the positions communicated by the Competition Judge.

He appoints his own assistants and coordinates their work.

He must prepare all the secretariat material and documents necessary for the competition.

He must check the results, report new records by inserting them in the record official reports. He must insert this documentation in the competition report, making it available to the Competition Judge and the CMAS Technical Delegate.

He must convey the results on the three top ranking athletes and on the composition of eventual play-offs.

The official results and ranking of the athletes must not be communicated by the secretary for their subsequent distribution without first being authorized by the Competition Judge.

He must prepare the final competition report.

When there is a press office, the Competition Secretary may, with the permission of the Director of Competition, communicate information on the competition to the media.

4.3.2 Other assistants

The Local Organizing Committee (LOC) appoints the other assistants deemed necessary for the competition; these persons are under the authority of the Director of Competition who, together with the Competition Judge, determines the various tasks to be assigned to each of them.

4.4 Technical meeting

A technical meeting must be held according to the regulations mentioned in the document "Bodies of control during the competition" in the document "Championships organization – Procedures & obligations"

4.5 Responsibilities

The application form sent by the federation in question, and signed by its president, guarantees that all the athletes are at least sixteen (16) years old, that they fulfill all the necessary criteria for the practice of underwater activities and that they are fully aware of the safety rules of underwater activities.

The organizing Federation must guarantee during the competitions the necessary assistance for the proper conducting of the competition, and must ensure that there is a first-aid service by competent healthcare staff authorized for this purpose.

The organizers and their representatives and staff, and the competition officials and judges shall have no responsibility for any damage to the equipment of the participants, or for any accidents occurring to the competitors and other participants after their participation in the sports event.

5 Precision Shooting

5.1 Definition

Precision shooting is an individual event.

5.1.1 Common settings

The gun must be supported by one arm only and held by one hand only without other supports on the arm or any other part of the body.

During the shot, the other arm may be used to provide stability holding, with his free hand, the ballast or the suction cup positioned at the bottom of the pool near the shooting line before the start of the event.

5.1.2 Setting for the 3meter shooting

Precision shooting consists in firing 10 shots on a fixed target in a single run within a time of 10 minutes.

The target sheet consists of five (5) targets and the athlete must shoot twice (2x) at each target.

The shooting line (B) is positioned 3 meters before the target (A).

The starting line (C) is positioned 12 meters before the shooting line (B).

Each shot is fired from a distance (called shooting line) of 3 meters from the target stand. Before the shot, the tip of the arrow must not cross this shooting line so that it must not penetrate the shooting zone.

After the shot, the athlete and his speargun swims underwater to the target stand to take his arrow off the target. Then he swims on the surface back to his preparation zone ([zone B/C](#)) for the next shot.

The athlete must respect the safety rules and must always load his speargun holding his gun in the direction of the shooting zone, whether at the surface or underwater.

5.1.3 Setting for the 4-meter shooting

Precision shooting consists in firing 10 shots on a fixed target in two separated rounds (5 shots for each round) within a time of 5 minutes for each round. The time not used in the first round cannot be added to the time of the second round.

The target sheet consists of five (5) targets and the athlete must fire one (1) shot on each target.

The shooting line (B) is positioned 4 meters before the target (A).

The starting line (C) is positioned 10 meters before the shooting line (B).

Each shot is fired from a distance (called shooting line) of 4 meters from the target stand. Before the shot, the tip of the arrow must not cross this shooting line so that it must not penetrate the shooting zone.

Between each shot, the athlete must return to the surface. Then he goes back to his preparation zone ([zone B/C](#)) for the next shot.

The athlete must respect the safety rules and must always load his speargun holding his gun in the direction of the shooting zone, whether at the surface or underwater.

5.2 Conducting of the competition

5.2.1 Typical timeline

The order of departure of the athletes will be decided on the basis of a draw performed by the Competition Judge. This draw must be made in the presence of the Competition officials in charge and the captains of each team present.

Before the starting signal of the competition, the athlete must take position in the pre-start zone on the order of the pre-start judge or one of his assistants, waiting to be allowed to enter the warming-up zone.

The competitor is requested by the organization to prepare his competition position in a maximum time of two (2) minutes, and then must take position behind the departure line and wait for the starting signal of the trial, which will be given within one (1) minute.

The competition must take place as follows:

- The athlete takes position behind the starting line and waits for the signal.
- 30 seconds before the start, the judge will allow the athlete to load his speargun.
- After the starting signal of the competition, the athlete swims on the surface to approach the shooting line where he can choose whether to load his gun in apnea or on the surface, then fires the shot, holding the gun with one arm and one hand only.
- After firing the athlete must pick up his arrow following the appropriate rules of his type of shooting, then come back to the surface and swim back to the shooting line.
- Then after reloading the speargun, he repeats the process until the last shot of his round.
- The round ends when the athlete, having fired all the shots, surfaces on the shooting line and swims back with the gun beyond the starting line where he raises his hand to signal the end of the run.
 - 10 shots in a row for the 3m shooting
 - 2 rounds of 5 shots for the 4m shooting
- The athlete must wait for the order of the starter judge to come out of the competition zone.

5.2.2 Play-off rounds

Direct playoffs will take place only in case of a tie for the top three positions, with one or more complete rounds of precision shooting and until the top three positions are recorded.

5.2.3 Particular incidents

When the competition takes place provision is made for particular incidents.

A particular incident during the conducting of the competition is defined as the breaking of the gun or problems with the equipment of the organization or of the competition facilities.

In case of breakage of the gun or the line, the athlete may replace the gun with a replacement gun or with a complete spear with a line in excellent condition, positioned behind the starting line, before the start of the competition.

During the operation of replacement of the gun, the time count is not interrupted.

If the replacement gun or the spear are not positioned behind the starting line, the athlete will finish the precision run and the shots fired up to that time will be evaluated.

The replacement gun may be used only if the first gun breaks.

The replaced guns are checked by the Competition Judge, and if he does not consider the replacement as a particular incident, he will apply a penalty to the athlete.

Any type of repairs to the gun or any parts of the gun are not allowed to be made during the competition.

In case of a particular incident due to problems due to the equipment of the organization or the competition facilities, the following procedures shall be as follows:

- The athlete subject to the interruption must report the incident by raising an arm to interrupt the timing of his performance, after which he has to return behind the starting line, even without his own gun, if the spear remains stuck in the target.
- The recording of the time will be interrupted, whereas the competition of the other athletes will duly continue.
- Once the runs of all the competitors of the same series are completed with the return behind the starting line, the problem that has caused the particular incident will be solved, and the athlete involved in the incident will be invited to return near the shooting line where, after a countdown of 30 seconds, the starting signal will be given again.
- From that moment the athlete can finish to fire the remaining shots while the time taken is added to the time already counted.
- Once the last shot is fired, the athlete will swim on the surface back behind the departure line where he will raise an arm to show that the run has been completed, which will stop the chronometer.

5.3 Violations, penalties and disqualifications

An athlete who, during the competition, commits a violation of the provisions contained in these regulations shall be subject to penalties or disqualifications as stated below:

5.3.1 Penalties – Both for 3m and 4m shootings

The athlete crosses the shooting line with the tip of the spear at the time of shooting.

Penalty: one hundred (100) points.

The athlete fires more shots than the authorized number on the same target.

Penalty : cancellation of all the excess shots fired on the same target that have the highest score(s)

5.3.2 Penalties for 3m shooting

The athlete goes back behind the starting line without resurfacing, once the 10 shots have been completed.

Penalty : one hundred (100) points

The athlete exceeds the time of ten (10) minutes given to the run.

Penalty : ten (10) points for every extra second exceeding the ten (10) minutes

5.3.3 Penalties for 4m shooting

The athlete goes back behind the starting line without resurfacing, once the five (5) shots have been completed.

Penalty : one hundred (100) points

The athlete exceeds the time of five (5) minutes given to the round.

Penalty : ten (10) points for every extra second beyond the five (5) minutes

5.3.4 Disqualifications – Both for 3m and 4m shootings

The athlete is disqualified when he commits one of the following violations :

- The athlete does not answer the call of the pre-start judge to enter the pre-start zone.
- The athlete enters the warming-up zone before being allowed by the pre-start judge.
- The athlete enters the calling zone or leaves the competition zone before being allowed to by the start judge.
- The athlete loads or uses his competition speargun at other moments than those of the runs or of his own competition.
- The athlete leaves his speargun loaded on the bottom of the pool.
- The athlete ties a knot to link both parts of the line if the line breaks during the competition.
- The athlete starts his run before the other competitors have finished their run.
- The competition judge declares the speargun not in compliance with the regulation.
- The athlete fires more shots than the authorized number on the same target sheet.

- The athlete fires more than one (1) shot in the same apnea.
- The athlete loads the speargun pointing at another direction than the target.
- Unsporting behaviour
- The athlete surfaces with a loaded speargun.
- The athlete picks up his equipment (suction cup, ballast ...) before the other athletes of the same run have finished their own or before they are allowed to do so by the Starter Judge.
- The athlete loads the speargun before the starter judge has given the signal to allow to load the spearguns.

5.3.5 Disqualifications – for 4m shooting

The athlete is disqualified when he commits the following violation:

- The athlete crosses the shooting line with any part of his body.

5.4 Scoring

The precision of each fired shot is measured with the procedures described in §9.1. The score given for a target sheet is the sum of all points obtained on each target, less the penalties.

The ranking of the athletes is established following the decreasing order of the score of the complete target sheet.

6 Biathlon

6.1 Definition

Biathlon is an individual event.

It consists in completing, with the same equipment, 3 courses (back to front) underwater, in apnea, firing one shot in each course, in a maximum time of **10 minutes**.

6.1.1 Common points

For each course the athlete fires one shot on a target sheet with five targets. The athlete chooses **3** of the **5** targets and fires one shot at each of the three targets.

After each shot, the athlete picks up his arrow following the procedures described for his [type of shooting](#) (3m or 4m), and swims back behind the starting line, reloads his gun again still pointing towards the target stand, and prepares for the next shot.

6.1.2 Biathlon Setting for 3-meter shooting

The shooting line (B) is positioned 3m before the target (A).

The starting line (C) is positioned 12m before the shooting line (B).

6.1.3 Biathlon Setting for 4-meter shooting

The shooting line (B) is positioned 4m before the target (A).

The starting line (C) is positioned 15m before the shooting line (B).

6.2 Conducting of the competition

6.2.1 Typical timeline

The starting order of the athletes is determined by a draw carried out by the Competition Judge. This draw must be carried out in the presence of the competition officials in charge of that competition and of the captains of each present team.

Before the beginning of the competition, the athlete takes position in the pre-start zone on order of the pre-start judge or of one of his assistants; then he waits for the order to enter the warming-up zone.

The organization requires the athlete to prepare his competition positioning in a maximum time of two (2) minutes. Then he must come in position behind the starting line and wait for the starting signal that will be given within one (1) minute.

The competition must be carried out following these followings steps:

- The athlete is allowed to load his speargun on the signal of the starter judge 30 seconds before the start.
- If the gun is loaded on the surface, it must be completed before the athlete crosses the starting line.
- He can load the speargun either on the surface or while swimming underwater in apnea or in front of the shooting line.

- When the starter judge gives the start, the athlete dives and swims underwater to the shooting line, in apnea.
- The athlete must shoot holding the speargun with only one arm and one hand.
- After shooting, the athlete must pick up his arrow following the procedure for his [type of shooting](#) (3m or 4m). Then he must swim back in apnea, underwater, behind the starting line. Next, after taking his breath at least once, he starts again the same course again, until the three shots have been fired.
- The run is completed and the time is stopped when the athlete surfaces with his gun behind the starting line, raising his hand.
- The athlete waits for the order of the judge to leave the competition zone.

At the end of each run, the athletes will have one minute to check on their shots on the target sheets. For this, they must leave their speargun behind the starting line, and approach the targets without touching them, for fear of being expelled from the competition.

6.2.2 Play-off rounds

Direct playoffs will take place only in case of a tie, in score and time, for the top three positions, with a complete run of biathlon and until the top three are recorded.

6.2.3 Particular incidents

When the competition takes place, provision is made for particular incidents. A particular incident during the conducting the competition is defined as the breaking of the gun or problems with the equipment of the organization or of the competition facilities.

In case of breakage of the gun or the line, the athlete may replace the gun with a replacement gun or with a spear complete with line in excellent condition, while positioned behind the starting line, before the start of the competition.

During the operation of changing the weapon, the time count is not interrupted.

If the replacement gun or the spear are not positioned behind the departure line, the athlete will complete the run.

The replacement gun may be used only if the first gun breaks.

The replaced guns are checked by the Competition Judge, and if he does not acknowledge the particular incident, he will apply a penalty to the athlete.

Any type of repairs to the gun or any parts of the gun are not allowed to be made during the competition.

In case of a particular incident due to problems due to the equipment of the organization or the competition facilities, the following procedures shall be as follows:

- The athlete subject to the interruption must report the particular incident by raising an arm to interrupt the timing of his performance, after returning behind the starting line, even without his own gun, if the spear remains stuck in the target.
- The recording of the time will be interrupted, whereas the competition of the other athletes will duly continue.
- Once the cause of the particular incident has been solved, the athlete stays behind the starting line and the starting signal will be given to him after a countdown of 30 seconds.
- When the starting signal is given, the time count starts again. From that moment the athlete can finish to fire the remaining shots while the time taken is added to the time already counted.
- Once the final shot is fired, the athlete will swim underwater back behind the starting line where he will raise an arm to show that his run has been completed, which will stop the chronometer.

6.3 Violations, penalties and disqualifications

An athlete who, during the competition commits a violation will be submitted to penalties according to the seriousness of the violation, as indicated below.

6.3.1 Penalties – both for 3m and 4m shootings

If more than one shot is fired on the same target,

Penalty: only the worst shot will be taken into account.

If the athlete crosses the shooting line with the point of the arrow at the moment he fires,

Penalty: one hundred (100) points

If the athlete exceeds the time of 10 minutes,

Penalty : the worst shot will not be taken into account.

6.3.2 Disqualifications – both for 3m and 4m

The athlete is disqualified when he commits one of the following violations:

- More than three (3) shots are counted on the target sheet.
- The athlete does not answer the call of the pre-start judge to enter the pre-start zone.
- The athlete enters the warming-up zone before being allowed by the pre-start judge.
- The athlete enters the calling zone or leaves the competition zone before being allowed to by the start judge.
- The athlete dives, loads his gun, or starts before the starting signal.
- The athletes loads or uses his speargun in zones that are not part of the competition zone.
- The athlete loads or uses his competition speargun at other moments than those of the runs or of his own competition.
- The athlete leaves his speargun loaded at the bottom of the pool.

- The athlete ties a knot to link both parts of the line if the line breaks during the competition.
- The athlete starts his run before the other competitors have finished their run.
- The competition judge declares the speargun not in compliance with the regulation.
- The athlete loads the speargun pointing at another direction than the target.
- Unsporting behaviour
- The athlete surfaces with a loaded speargun.
- The athlete picks up his equipment (suction cup, ballast ...) before the other athletes of the same run have finished their own or before they are allowed to do so by the Starter Judge.
- The athlete loads the speargun before the starter judge has given the signal to allow to load the spearguns.

6.3.3 Disqualifications – 4m shooting

The athlete is disqualified when he commits the following violation:

- The athlete crosses the shooting line with any part of his body.

6.4 Biathlon Scoring

The score is calculated as follows on a biathlon target:

The precision of each impact is measured using the procedure described in §9.1.

The **total score** will be the sum of all the points appointed for the three shots.

The **final score** will be calculated as follows :

[Total score -time (in seconds x2)] x2 – penalties

Negative scores are not taken into account.

Scores that are not whole numbers are rounded off to the nearest number.

Example:

Total score from targets: $450 + 320 + 285 = 1055$

Time: **2 min 30 sec 3 tenth of a sec** (150,3 sec) $\times 2 = 300,6$

Score: **$1055 - 300,6 = 754,4 \times 2 = 1508,8$**

Penalties: 100 points = 100

Final score: $1508,8 - 100 = 1409$

The ranking of the athletes goes from the highest final score to the lowest final score.

7 Super-Biathlon

7.1 Definition

The Super biathlon is an individual event.

The Super biathlon consists in firing five shots, one for each target, making a back to front course in apnea, five times, firing one (1) shot for each run.

The maximum time to complete a super-biathlon is 10 (ten) minutes.

7.1.1 Common points

After each shot, the athlete picks up his arrow, following the procedures described for his [type of shooting](#) (3m or 4m), and swims back behind the starting line, reloads his gun pointing towards the target stand and prepares for the next shot.

7.1.2 Super-biathlon Setting for 3-meter shooting

The shooting line (B) is positioned 3m before the target (A).

The starting line (C) is positioned 7m before the shooting line (B).

7.1.3 Super-biathlon Setting for 4-meter shooting

The shooting line (B) is positioned 4m before the target (A).

The starting line (C) is positioned 10m before the shooting line (B).

7.2 Conducting of the competition

7.2.1 Typical timeline

The starting order of the athletes is determined by a draw carried out by the Competition Judge. This draw must be carried out in the presence of the competition officials in charge of that competition and of the captains of each present team.

Before the beginning of the competition, the athlete takes position in the pre-start zone on order of the pre-start judge or of one of his assistants ; then he waits for the order to enter the warming-up zone.

The organization requires the athlete to prepare his competition positioning in a maximum time of two (2) minutes. Then he must come in position behind the starting line and wait for the starting signal that will be given within one (1) minute.

The competition must be carried out following these followings steps:

- The athlete is allowed to load his speargun on the signal of the starter judge 30 seconds before the start.
- If the gun is loaded on the surface, it must be completed before the athlete crosses the starting line.
- He can load the speargun either on the surface or while swimming underwater in apnea or in front of the shooting line.
- When the starter judge gives the start, the athlete dives and swims underwater to the shooting line, in apnea.
- The athlete must shoot holding the speargun with only one arm and one hand.

- After shooting, the athlete must pick up his arrow following the procedures described for his type of shooting (3m or 4m). Then he must swim back in apnea, underwater, behind the starting line. Next, after taking his breath at least once, he starts the same course again, until the five shots have been fired.
- The run is completed and the time is stopped when the athlete surfaces with his gun behind the starting line, raising his hand.
- The athlete waits for the order of the judge to leave the competition zone.

7.2.2 Play-off rounds

Direct playoffs will take place only in case of a tie, in score and time, for the top three positions, with a complete round of super-biathlon and until the top three are recorded.

7.2.3 Particular incidents

When the competition takes place, provision is made for particular incidents. A particular incident during the conducting the competition is defined as the breaking of the gun or problems with the equipment of the organization or of the competition facilities.

In case of breakage of the gun or the line, the athlete may replace the gun with a replacement gun or with a complete spear with a line in excellent condition, while positioned behind the starting line, before the start of the competition.

During the operation of changing the weapon, the time count is not interrupted.

If the replacement gun or the spear are not positioned behind the starting line, the athlete will complete the run.

The replacement gun may be used only if the first gun breaks.

The replaced guns are checked by the Competition Judge, and if he does not acknowledge the particular incident, he will apply a penalty to the athlete.

Any type of repairs to the gun or any parts of the gun are not allowed to be made during the competition.

In case of a particular incident due to problems due to the equipment of the organization or the competition facilities, the following procedures shall be as follows:

- The athlete subject to the interruption must report the particular incident by raising an arm to interrupt the timing of his performance, after returning behind the starting line, even without his own gun, if the spear remains stuck in the target.
- The recording of the time will be interrupted, whereas the competition of the other athletes will duly continue.

- Once the cause of the particular incident has been solved, the athlete stays behind the starting line and the starting signal will be given to him after a countdown of 30 seconds.
- When the starting signal is given, the time count starts again. From that moment the athlete can finish to fire the remaining shots while the time taken is added to the time already counted.
- Once the final shot is fired, the athlete will swim underwater back behind the starting line where he will raise an arm to show that his run has been completed, which will stop the chronometer.

7.3 Violations, penalties and disqualifications

7.3.1 Penalties – Both for 3m and 4m shootings

For the run to be valid, the five (5) courses must have been executed and the five (5) shots must have been fired.

A run which, during the competition, is interrupted or incomplete, is not considered as valid.

An athlete who, during the competition commits a violation will be submitted to penalties according to the seriousness of the violation, as indicated below:

The athlete crosses the shooting line with the point of the arrow when he shoots.

Penalty: 30" (thirty seconds) for each violation, added to the total time recorded.

The athlete dives, loads his speargun and starts off before the starting signal.

Penalty: 30" (thirty seconds) for each violation, added to the total time recorded.

The athlete exceeds the time limit of 240 seconds for the men's category, and 270 seconds for the women's category, time including the eventual time penalties.

Penalty: One valid shot is canceled.

The athlete takes 45 seconds over the time limit (285 seconds for the men's category and 315 seconds for the women's category), time including the eventual times penalties.

Penalty: elimination of another valid shot with a total of two (2) valid shots canceled on the total valid shots recorded.

7.3.2 Disqualifications – Both for the 3m and 4m

The athlete is disqualified when he commits one of the following violations:

- The athlete does not answer the call of the pre-start judge to enter the pre-start zone.
- The athlete enters the warming-up zone before being allowed by the pre-start judge.
- The athlete enters the calling zone or leaves the competition zone before being allowed to by the start judge.
- The athlete dives, loads his gun, or starts before the starting signal.

- The athlete loads or uses his speargun in zones that are not part of the competition zone.
- The athlete loads or uses his competition speargun at other moments than those of the run or of his own competition.
- The athlete leaves his speargun loaded at the bottom of the pool.
- The athlete ties a knot to link both parts of the line if the line breaks during the competition.
- The athlete starts his run before the other competitors have finished their run.
- The competition judge declares the speargun not in compliance with the regulation.
- The athlete loads the speargun, on the surface or underwater, pointing at another direction than the target.
- Unsporting behaviour
- The athlete surfaces with a loaded speargun.
- The athlete picks up his equipment (underwater, suction cup, ballast ...) before the other athletes of the same run have finished their own or before they are allowed to do so by the Starter Judge.
- The athlete loads the speargun before the starter judge has given the signal to allow to load the spearguns.
- The athlete exceeds the preset time limit of 10 minutes.

7.3.3 Disqualifications for 4-meter shooting

The athlete is disqualified when he commits the following violation:

- The athlete crosses the shooting line with one of the parts of his body.

7.4 Scoring

The use of a special graduated scorecard, is used just for establishing that the shot is positioned inside the target or outside: the center of the impact must not exceed the external target border.

The ranking is established as follows:

- Add the time penalties to the time done by the athlete.
- Decrease the number of valid shots according to the time scale applied to the athlete.
- Classify the athletes according to the top down number of valid shots, then according to the bottom-up final time (penalties included).

8 Relay event

8.1 Definition

The relay event is a team competition involving men or women and mixed teams.

The Relay event consists in swimming nine (9) back-to-front courses underwater, firing nine (9) shots, one shot for each course, on one of the nine (9) targets of the target sheet.

8.1.1 Common points

Each nation may enter up to two (2) teams composed of three (3) members each.

The relay event takes place in a single round within a time limit of four (4) minutes and thirty (30) seconds.

Each member of the team fires three (3) shots on the nine (9) shots.

8.1.2 Setting for the Relay for 3m shooting

The shooting line (B) is positioned 3m before the target (A).

The starting line (C) is positioned 12m before the shooting line (B).

8.1.3 Setting for the Relay for 4m shooting

The shooting line (B) is positioned 4m before the target (A).

The starting line (C) is positioned 10m before the shooting line (B).

8.2 Conducting of the relay event

8.2.1 Typical timeline

The order of departure of the athletes will be decided on the basis of a draw performed by the Competition Judge. This draw must be made in the presence of the Competition officials in charge and the captains of each team present.

Before the relay event starts, the team takes place in the pre-start zone on order of the pre-start judge or of one of his assistants, and waits for the order to enter the warming-up zone.

The team is invited by the organization to prepare its shooting position in the maximum time of three (3) minutes. Then the team must then take position behind the starting line and await the starting signal, which will be given one (1) minute after the positioning of the last of the athletes competing.

The event must take place as follows:

- One athlete stands in the starting zone while the two others wait for their turn in the call zone.
- Thirty (30) seconds before the start, the starting judge allows the athlete to load his gun.

- When the starting signal is given, the athlete dives and swims his run underwater. He can load his gun on the surface before the starting line, while swimming underwater or when approaching the shooting line. As soon as the first athlete has dived and as soon as his head has crossed the starting line, the second athlete is allowed to enter the starting zone.
- When he has reached the shooting line, the athlete must fire the shot with the gun supported by one arm only and held by one hand only without any other supports on the body; the other arm may be used to provide stability to the body.
- After shooting, the athlete must pick up his spear according to the [appropriate procedure](#) (3m or 4m shooting). Then he must swim back underwater to go behind the starting line. When he has crossed the starting line, he must pass the relay onto the second athlete who has to perform the same course following the same procedure. Both athletes must touch hands, above the surface and in the starting zone for the judges to see it, for the relay to be considered valid. At that moment, the gun must not be loaded. The athlete who has completed his run, after the relay exchange, must go back behind the line of the call zone. Meanwhile, the third athlete, as soon as the second one dives, and crosses the starting line with his head, can enter the starting zone.
- The relay event is completed, when all the athletes have completed all their courses and all their shots. When the last athlete has fired the last shot (number 9), he swims back underwater behind the starting line and surfaces holding his arm straight up to signal the end of the relay.
- The team must wait for the order of the starting judge to leave the competition zone.

8.2.2 Play-off rounds

Direct play-offs, consisting in performing again the complete relay event, will take place only in case of a score tie for the first three ranking positions.

8.2.3 Particular incidents

When the competition takes place provision is made for particular incidents.

A particular incident during the conducting of the competition is defined as the breaking of the gun or problems with the equipment of the organization or of the competition facilities.

In case of breakage of the gun or the line, the athlete may replace the gun with a replacement gun or with a complete spear with a line in excellent condition, while positioned behind the starting line, before the start of the competition.

During the operation of changing the weapon, the time count is not interrupted.

If the replacement gun or the spear are not positioned behind the starting line, the athlete will complete the run and the shots fired up to that time will be evaluated, without taking into account the eventual bonus deriving from the time recorded under the 4 minutes and 30 seconds.

The replacement gun may be used only if the first gun breaks.

The replaced guns are checked by the Competition Judge, and if he does not acknowledge the particular incident, he will apply a penalty to the athlete.

Any type of repairs to the gun or any parts of the gun are not allowed to be made during the competition.

In case of a particular incident due to problems due to the equipment of the organization or the competition facilities, the following procedures shall be as follows:

- The athlete must report the particular incident after returning behind the starting line, and before the exchange with the other athlete, even without his own gun if the spear remains stuck in the target, while the competition of the other teams will duly continue.
- Once the cause of the particular incident has been solved, the run will be resumed by the athlete after the one who has experienced the particular incident.
- The athlete will remain positioned behind the starting line where he will again be given the starting signal, after the countdown of 30 seconds. From then on, the team can complete the remaining shots.
- The recording of the time will resume and be added to the time already recorded.
- Once the last shot is fired, the athlete will return behind the starting line where he will raise an arm to signal the completion of the run, interrupting the time.

8.3 Violations, penalties and disqualifications

8.3.1 Penalties – both for 3m and 4m shootings

When one athlete of a team commits a violation to these rules, during the event, his team will receive a penalty depending on the seriousness of the violation, as indicated below:

The athletes must not cross the shooting line with the point of the arrow when shooting.

Penalty : one hundred (100) points

The team is allowed to fire only nine (9) shots on the target and in any case only one shot on each target.

After checking the score, all the excess shots will be declared invalid, and penalties granted according to the following procedures :

Nine shots on the target sheet, if two shots or more are on the same visual target

Penalty : for each excess shot, the shot with the highest score is declared invalid.

8.3.2 Disqualifications – both for 3m and 4m shootings

The athlete is disqualified when he commits one of the following violations:

- The athlete does not answer the call of the pre-start judge to enter the pre-start zone.
- The athlete enters the warming-up zone before being allowed by the pre-start judge.
- The athlete enters the calling zone or leaves the competition zone before being allowed to by the start judge.
- The athlete dives, loads his gun, or starts before the starting signal.
- The athlete loads or uses his speargun in zones that are not part of the competition zone.
- The athlete loads or uses his competition speargun at other moments than those of the runs or of his own competition.
- The athlete leaves his speargun loaded at the bottom of the pool.
- The athlete ties a knot to link both parts of the line if the line breaks during the competition.
- The athlete starts his own before the other competitors have finished their run.
- The competition judge declares the speargun not in compliance with the regulation.
- The athlete loads the speargun, on the surface or underwater, pointing at another direction than the target.
- Unsporting behaviour
- The athlete surfaces with a loaded speargun.
- The athlete picks up his equipment (suction cup, ballast ...) before the other athletes of the same run have finished their run or before they are allowed to do so by the Starter Judge.
- The athlete loads the speargun before the starter judge has given the signal to allow to load the spearguns.
- The athlete shoots more than one (1) shot in the same apnea.
- More than nine (9) shots on the same target.
- More than nine (9) runs.
- More than three (3) runs for each athlete.
- One member of the team loads his gun before the relay exchange between both athletes.
- One member of the team loads the gun before the starting signal gives them the signal to allow them to load the gun.
- An athlete doesn't respect the fact that he is only allowed to use his own gun for the relay event, and only allowed to use, for replacement, a replacement gun (gun, arrow, line) that he has positioned behind the starting line before the start of the relay event.
- An athlete does not respect the rules for the relay exchange:
 - The gun must be unloaded for the relay exchange.
 - The hands of the athletes must be clearly visible above the surface when they touch hands.

8.3.3 Disqualifications – 4-meter shooting

The athlete is disqualified when he crosses the shooting line with one of the parts of his body.

8.4 Scoring

The score of a relay target sheet is calculated as follows:

The precision of the impact is measured with the procedure described in §9.1.

The **total score** is the sum of the points obtained for the nine shots.

A **bonus** of ten (10) points is granted for each second less regarding the maximum authorized time of four (4) minutes and thirty (30) seconds. The bonus is added to the **total score**.

A **penalty** of ten (10) points is assigned for each second over the maximum authorized time of four (4) minutes and thirty (30) seconds. The penalty is subtracted from the **total score**.

The **final score** is calculated as follows : **total score + bonuses - penalties**

The ranking of the athletes is established from the highest **final score** to the lowest **final score**.

9 Ranking

The measurements and validation of the points, described below, concern all the different types of underwater target shootings, both in 3m and 4m shootings.

9.1 Measure of the precision shots.

The evaluation of the score to assign to the target will take place in a dedicated zone. Only the judges and team captains are allowed to enter this scoring zone. One of the possible scoring systems can be presented as follows:

The evaluation of each shot will be done using a special graduated scorecard. The score will be determined by positioning a needle with a diameter of 6.5mm in the impact hole of every single target and by matching the target with the circular references. The index (= the middle of this needle) will determine the score assigned to each shot, which will be read directly on the graduated scorecard.



If the index on the graduated scorecard is in an intermediate position between two values, the higher value will be assigned.

If the middle of the shot is out of the graduated scorecard, the score assigned will be zero (0).

If the point of impact of the arrow is not clearly visible on the target sheet, making the insertion of the needle impossible, and so the evaluation of the score also impossible, then the score will be assessed directly by the Competition Judge.

9.2 Validation of the scores

At the end of the evaluation of the scores, the target sheet will be made available to the team captain or, in his absence, to the athlete himself, who, after having examined the target sheet in the presence of the competition judge, will endorse the score as valid.

9.3 Claims

Refer to the claim procedures and obligations available on the [cmas.org](https://www.cmas.org) website.

9.4 Podiums

Each individual event will have its own podium.

3m and 4m target shootings will have their own separate podium for each individual event.

The value of the ranking point is the place assigned to each athlete in the ranking of each individual event.

The combined score is the sum of the ranking points in each individual event.
The combined podium rewards the athletes having the smallest combined score.
3m and 4m combined shootings will have a separate combined podium.

When both 3m and 4m shootings are displayed in the same competition, the podium of the super combined shootings rewards the athletes with the smallest sum of points in both 3m and 4m shootings.

Except for the super combined shooting, the rankings are separate for 3m and 4m shootings.

10 Records

10.1 Generalities

A record is a performance that surpasses the previous best performance achieved in a CMAS competition under the CMAS international rules and regulations and registered on the CMAS competition calendar.

The performance is measured with the score assigned for the event in question:

- in points for the precision event
- in points for the biathlon event
- in number of valid impacts and in time for the super-biathlon event
- in points for the relay event

A record is established during a competition using the CMAS international rules and regulations and registered on the CMAS competition calendar.

Only the following records are homologated by the CMAS:

- World records
- Continental records

The official CMAS application form for the homologation of records must be filled by the official member of the organization committee of the competition and must be signed by the competition judge asserting that all the rules have been respected.

The record will then be ipso facto declared valid and receives homologation immediately after the negative anti-doping test has been received.

10.2 Types of records

The records follow the different categories and types of shootings:

- Precision, 3m
- Precision 4m
- Biathlon 3m
- Biathlon 4m
- Super-Biathlon 3m
- Super-Biathlon 4m
- Relay 3m
- Relay 4m

10.3 Categories

The homologation of records respect the following categories:

- Men
- Women