GOOD PRACTICES HANDBOOK FOR BULL SHARK DIVING IN PLAYA DEL CARMEN.
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INTRODUCTION

Bull shark (Carcharhinus leucas) diving is classified as an alternative/adventure tourism activity; given its modality, as principal criteria, one has to procure the safety of users, the operators, the ecosystem and sharks. Besides, being an eco-tourism activity of relatively low impact on the ecosystem, it is promoted that service providers participate and contribute to the conservation of the resource by promoting respect for the environment, appreciating and taking care of all the natural resources used for recreation; In addition to generating an experience significant for the visitor.

MAIN GOAL

This Handbook of Best Practices for Bull Shark Diving in Playa del Carmen, Quintana Roo is a normative and voluntary instrument, whose main objective is to contribute to the sustainable management of the resource by regulating the touristic activities performed with sharks in their natural environment.

The compliance of this handbook is focused on three main objectives

1.- Regulate diving and sighting activities so that the main three principles are met:

2. Minimize accident risks and maximize the quality of each dive diving

.3 Raise awareness about the importance of sharks within the marine ecosystem.
Therefore, this handbook will promote a quality tourist activity, where natural attractions, services and facilities are combined, to motivate the visitor to repeat it and recommend it to other visitors.

Through participatory workshops that involved different diving centers in Playa del Carmen, NGO’s, local and federal government dependencies, academics and shark diving specialists, it was possible to create this Good Practice Handbook specific for Playa del Carmen

JUSTIFICATION

In this document, actions aimed to ensure a good performance of the bull shark diving activity are being established, so are the measure to standardize procedures to minimize accident risks.

Playa del Carmen is considered one of the top sites in the world to perform this particular diving activity due to the clearness of their waters, amount of individuals that can be observed in a single dive (up to 24) and it’s close distance to the shoreline.

Only in 2012, it is estimated that 14,000 immersions of this type took place. As a response to the growing demand, the number of tour operators that provide this service is also growing. In Playa del Carmen there are more than forty dive shops that carry out this activity, in addition to independent divers and foreign dive centers. Due to the large number of diving service providers, the different of procedures for interactions, and for being considered as a high risk dive, Saving Our Sharks took the initiative to develop this handbook in order to achieve the fundamental benefits of sustainable tourism that are:

1. Improve the life quality of local populations

2. Provide a top quality experience for the visitor

3. Preserve the environment
Taking advantage of the knowledge generated by the Reserve Management of the Guadalupe Island Biosphere (DRBIG) and the Costa Occidental National Park of Isla Mujeres, Punta Cancún and Punta Nizúc, in collaboration with scientists, professionals, technicians, tour operators and management expert, it was planned that this Handbook of good practices becomes an effective tool for the management and conservation of bull shark in Playa del Carmen.

**LEGAL ORDINANCES THAT REGULATE DIVING TOURISM ACTIVITY**

- NOM-09-TUR-2002. That establishes the elements to be subject guides specializing in specific activities.
- NOM-05-TUR-2003. Establishing minimum safety requirements to which dive operators must be subjected in order to guarantee the provision of the service. (2004)
- Program of Marine Ecology in the Gulf of Mexico and the Caribbean Sea (2012).
- Voluntary instruments that regulate the tourist activity of diving.
- Voluntary standards for sustainable marine recreation in the Mesoamerican reef, containing specifications in relation to: (i) Diving services; (ii) Snorkeling Services; and (iii) recreational boat operations.
- Practical guide to good practice. Management of environmental issues in the marine recreation sector.
# BULL SHARK DIVE TYPE DEFINITIONS

<table>
<thead>
<tr>
<th>Dive types</th>
<th>Dive subtypes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attraction</strong></td>
<td></td>
</tr>
<tr>
<td>I.1 Direct attraction: The shark is lured in with hand controlled bait for maximum control. Bait is carried within a sealed container. (See specifications)</td>
<td></td>
</tr>
<tr>
<td>I.2 Auditive attraction: A device is used to create noise (plastic bottle, rock). Extreme precautions as shark’s reaction may be more unpredictable.</td>
<td></td>
</tr>
<tr>
<td><strong>Observation</strong></td>
<td></td>
</tr>
<tr>
<td>II.1 Drift diving observation: In the designated area.</td>
<td></td>
</tr>
<tr>
<td>II.2 Casual encounter: May occur outside the designated area without any type of attraction. It is recommended to follow general observation procedure.</td>
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</tbody>
</table>
GENERAL OBSERVATION RULES

It applies to all individuals, natural or legal persons who perform or diving activities in the Exclusive Diving Area of interaction with bull shark. Also applies for individuals who do the activity on a non-profit basis and permit holders who carry out the activity profitably.

I. Diving with the bull shark (BS) will be done exclusively in the established area (Annex II).

II. The diving activities of interaction with BS will be divided in two main types: With attraction and Without attraction, each with subtypes of according to Table I

III. The designated schedule for each of the diving modalities will be respected and under no circumstances should they be carried out simultaneously (Annex II).

IV. Diving in direct attraction mode will have a designated area for its realization between the 23 and 27 meters of depth.

V. Only registered local operators who follow the stipulated standards will have access to the area.

VI. A dress and equipment code will be followed for any BS diving type (Table II).

VII. Night dives are forbidden for both modalities.

VIII. The understanding of signaling should be respected and promoted amongst visitors

IX. In no case will it be allowed to exceed the limits of non-decompression.

X. The schedule for the diving activities will be from 8:00 a.m. to 5:00 p.m.
XI. The permit holder and his staff must be responsible persons with documented experience in maritime navigation and the BS diving activity. Likewise, the permit holder and his crew must have the complete official documentation to offer maritime tourism services.

XII. The service provider must conduct his activity in the most honest and transparent manner, maintaining a high level of professionalism, making the best effort to satisfy their customers.

XIII. The service provider and his crew must cooperate and collaborate in a friendly manner with the other service providers and local fishermen, striving to build an environment of harmony and cordiality.

XIV. Both the diving centers and their vessels must have Information available to the public about standards of conduct.

XV. Verbal information should be provided to users entering an area of ecological fragility, so they should avoid touching or subtract any species of flora and fauna.

XVI. It will actively support efforts towards sustainable diving with the BS, following the practices established in this handbook, participating in educational activities, monitoring processes and denouncing any irregularity.

XVII. The use of non-biodegradable suntan lotions, oils and blockers is prohibited.

XVIII. A special fee (donation) will be charged to customers to support the programs for monitoring, research and protection of sharks. This donation will be administered by an independent organization unrelated to any dive shop.
SECURITY

I. Tourists shall be informed about the security procedures prior to diving with BS.

II. All boats entering any of the diving areas of BS interaction, should have a complete first aid kit (Regular bandages, hemostatic agent bandages, complete oxygen kit: calibrated, filled and in good condition) and all members of the crew must have a first aid certification course with no more than one year of seniority.

III. The special emergency BS diving plan must be printed and laminated. (Annex I).

IV. Emergency phone numbers, should be printed in the boat and recorded on the staffs cell phone.

V. Diving center operators must take out insurance civil liability and damages to third parties, in force throughout the BS sighting season.

VI. VHF radio and cell phone must be available in the dive center and should be in direct and constant communication with the boat and base of Surveillance and assistance. The use of Nautilus Life Line waterproof communication radios is recomended.

VII. There should be have an agreement of direct and immediate attention with hospitals and hyperbaric chambers.
EQUIPMENT

I. DARK COLORED AND WITH NO CONTRASTING COLORS FULL WETSUITS AS WELL AS ALL OF THE ASSOCIATED EQUIPMENT (MASKS, FINS, SOCKS, GLOVES ETC.) MUST BE WORN DURING ANY BS DIVE

II. Visitors will not be allowed to carry extra equipment like: white writing boards, knives, snorkel, rails or any equipment not specified in this handbook. It will only be permitted to carry an emergency buoy attached to the body, concealed within the bags of the BCD and without hindrance. * The use of cameras will deserve a particular briefing and if this is a professional camera with external lighting system will require the hiring of an escort guide for the photographer in question.

III. BS diving in the specified areas will only be allowed to operators that fulfill the requirements listed in Table II.

* Note: Descending with other types of attachments and equipment will only be allowed to the technical and scientific personnel of the area.
<table>
<thead>
<tr>
<th>Equipment</th>
<th>Attraction guide</th>
<th>Attraction guide assistant</th>
<th>Observation guide</th>
<th>Observation guide assistant</th>
<th>Visitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mesh suit (Hood and gloves)</td>
<td>X</td>
<td>X</td>
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<tr>
<td>BCD</td>
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<td>X</td>
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<tr>
<td>Regulator</td>
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<tr>
<td>Octopus and 2mts hose</td>
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<td>X</td>
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<tr>
<td>Diving Computer</td>
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<tr>
<td>Full dark colored wetsuit</td>
<td>X</td>
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<tr>
<td>Dark colored fins</td>
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<td>Mask</td>
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<td>Weight belt</td>
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<tr>
<td>Red colored signaling buoy</td>
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<tr>
<td>Emergency yellow buoy</td>
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<tr>
<td>20 kg loading buoy</td>
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<tr>
<td>Torniquet rubber bands</td>
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<tr>
<td>Wet suit chunk to cover wounds</td>
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<td></td>
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<tr>
<td>Scissors or knives</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>T shape aluminum bar</td>
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<td></td>
<td>X</td>
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</tr>
<tr>
<td>Bright colored hermetic container of 10 kgs of maximum bait volume</td>
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</table>
RULES FOR DIVE CENTER OPERATORS

I. With the follow-up of this handbook and through awareness, visitors will seek to promote the protection and conservation of the species through the practice of scuba diving in a responsible and safe way.

II. The dive center must comply with the Official Mexican Standard NOM-05-TUR2003.

III. Only guides that comply with the Official Mexican Standard NOM-09-TUR-2002 should be hired by the dive center.

IV. It shall be the obligation of the nautical tourism permit holder to comply with Harbor captaincy provisions for tourist vessels.

V. The boats used to dive with BS must carry the flag that identifies them as such and that shows the dive mode of interaction that they are performing.

VI. Only guides that have the relevant permits that allow them to develop their activities regularly and legally in the zone should be hired.

VII. The minimum level of experience, in order to hire a guide, will be Divemaster. Also, they are expected to be experienced with BS diving.

VIII. In the event of hiring foreign guides, they must have the full immigration documentation in order.

IX. The operator must have the specific permission to do the interactive dive with BS.

X. There will be a specific emergency plan for this dive that must be known by the tourists before carrying out the activity.
XI. An accident simulation must be performed at least once per season with the staff of each store involving the corresponding authorities. It should take into account hospital routes, nearby hyperbaric chambers, etc.

XII. You must have the required safety equipment to perform the interactive dive with attraction (Table II).

XIII. All the SCUBA diving equipment used during BS diving activities, must be in excellent condition.

XIV. There should be sufficient accessible and visible containers for garbage within the vessel.

XV. The required forms (history of diving, liability, medical history and accident insurance) for this dive to be completed and signed by visitors prior to the dive. Visitors will also be asked to sign their signature in accordance with The Emergency Plan (Annex I) and with the visitor regulations of the this handbook. (Annex III).

VISITOR’S MINIMUM EXPERIENCE REQUIRED

I. Open water diver certification will be solicitated on site.

II. The service can only be offered to divers who have an OWD certification with a minimum of 25 testable experience dives. If you have fewer dives you must make a compulsory dive previous to the dive shop to verify their skills.

III. An objective and professional evaluation of the clients will be conducted to determine if they are suitable for diving with BS.
IV. If you have more than 6 months since your last dive, you must perform an assessment dive so professionals can evaluate your diving skills.

V. Inform tourists that diving with BS is a risk activity.

VI. Inform tourists that the BS sighting is NOT guaranteed.

VII. Each tourist will be charged a donation fee and will be given a bracelet explaining the reason for that extra fee.

VIII. A full safety briefing should be conducted with support of a visual medium (Annex V).

GROUP SIZES

I. In any dive mode of interaction with BS, the minimum number of guides will be determined by the number of participant divers.

II. In the case of observation dive, a relation of 1 guide per 5 divers will be taken in place. For attraction dives, there will be six divers per group and one guide responsible for each group. In the event of having seven visiting divers or up to twelve visitors, an additional assistant guide must be added, in case of thirteen to eighteen visitors, there must be three assistant guides.

III. Groups of up to eighteen visiting divers per boat will be handled.

IV. Activities that are not specified in the issued permit cannot be carried out.
LURE HANDLING

I. It is prohibited to attract sharks outside the boundaries of the designated attraction area.

II. It will only be permitted to dive with an open circuit SCUBA diving equipment.

III. Under no circumstance will it be permitted to bait sharks from the surface. This is to prevent sharks from coming up to the surface and leading to a possible encounter with a diver.

IV. Bait will be handled only by the authorized diving guide, and it will be released from a depth of 23 to 27 mts.

V. Professional photographers may hire an exclusive service that allows them to have a preferential dive spot from the rest of the group. He/she shall be escorted by a guide exclusively dedicated to the diver’s safety and will also have to obey every rule given by any of the two guides.

VI. For research purposes, any photographic or videographic material will be shared with the tour operator if solicited.

SPECIALIZED BULL SHARK DIVING GUIDE

I. Three types of BS diving guides will be designated: observation guide, assistant guide and attraction guide.

II. Diving guide will have to be aware of the public use of the Good Practice Handbook for a sustainable bull shark diving activity.

III. Diving guide must have the certification of specialized guide to do the bull shark diving activity.
IV. Diving guide must have an up to date certification in first aid, eleven months prior to the bull shark season.

V. Security measures, procedures, and dress code standards established in this Handbook, will be met.

VI. It will be the guide’s responsibility to make sure that rules are met and the established diving areas are respected.

VII. With the objective of raising awareness about environment protection, and using visual material, vital information about good diving practices should be included during the visitor’s briefing.

VIII. Guides will not be allowed to put the tourist in danger, thus visitor’s don’t always have the experience needed and could panic; this situation must be avoided.

IX. Tender care will be given to sharks, providing visitors with timely information about each species’ characteristics regarding their biology, ecology, threats, conservation status, etc. All shall be provided with the aid of visual material.

X. Diving plan shall be detailed and briefed prior to the dive.

XI. Signaling buoys should be concealed within the BCD’s bags.

XII. Visitor’s will be given the proper equipment for the activity, and it will be mandatory to check that they are wearing it properly.

XIII. The guide will have to make sure that every visitor does a proper free descent to the bottom and that they position themselves at the location previously briefed.

XIV. The guide will have to keep everyone together during the whole activity (descent, dive, ascent) and attentive to his indications.

XV. No-decompression limits shall be met at the safety stop indicated by the guide.
XVI. It will be the guide’s responsibility to closely observe the shark’s behavior. Certain changes like pectoral fins pointing downwards, rapid movements, and muscular tension increment, may indicate a certain level of aggression from the animal.

XVII. Strong currents, bad visibility and potentially dangerous behavior from the sharks are possible scenarios in which the guide will have to cancel the dive and ascent in a paced and safe manner.

XVIII. It is prohibited to block the shark’s trajectory.

XIX. Environmental education will be spread amongst the service providers, as well as the proper use of the BS diving Handbook.

XX. The guide will let every visitor know the importance of not leaving disposable objects on the boat thus this may contaminate the sea if they fall off.

VISITOR’S TRANSFER, ASCENT AND DESCENT

I. TRANSFER

- Visitors must remain seated along the journey until the vessel has been secured and anchored.
- Visitors shall be reminded about boat-descent procedures and proper care of equipment.

II. DESCENT

- The entry procedure will depend on the guide’s decision.
- Descent must be performed in one group together.
- The dive type must be done in compliance with the specifications previously described in this handbook.
III. ASCENT

- Once finished, guides will give the ascent signal and the group shall commence going to the surface, where the boat crew will be waiting for the divers.
- The guide will signal "up", which will indicate that the dive is over, immediately the whole group will be ascending at a speed of 9 mts per minute until reaching 5 m deep, to make the security stop for 3 minutes.
- The ascent should respect the safety stop and will be straight to surface, avoiding going to the coast line.
- It is the guide’s responsibility to ensure the group remains together during the ascent.
- Upon arrival to the surface, the diver must inflate the BCD, put the mask in the neck and remain in close distance of the group, avoiding rapid movements.

IV. BOAT ENTRY

- The skipper should approach the boat so the Support go up first and help the divers to climb, meanwhile the guide of observation will wait in the water until the last diver rises.
- Multilevel diving is prohibited.
- During this maneuver, it is the captain's responsibility to observe the behavior of the TT, since the ascent and entrance to the boat are considered risk.
- The guide must verify that the visitors are boarding the boat one by one, with the help of the support guide and the sailor.
• Each of the visitors will take their assigned site on the boat and shall remain seated until they reach the place of embarkation and fully anchored and secured.

V. TRANSFER TO SHIPMENT SITE

• With the divers on board, the captain will follow along the safety procedures prior to the transfer to the shipment site.
• A list of assistance will take place to ensure that everyone is on board prior to departure.
• Once everyone’s presence is confirmed, the captain shall communicate to the dive center to report: vessel’s name, captain’s name, number and condition of the divers and departure time from the dive site to the shipment site.

VI. DIVING FEEDBACK

• The guide and helper will direct the diving feedback for the Divers, where general observations of diving will be made, such as: to congratulate or correcting divers’ performance during scuba diving and diving Lysis of TT behavior. Emphasis will be placed on respect for having the TT, its importance in the ecosystem and also you will remember why they are worth more alive than dead and how they can continue to support the protection of the species (diving with sharks, donations, souvenirs, volunteers, etc.).
• For research purposes, visitors will be asked to do an online survey.
• If the captain used to be a fishermen, he will explain to the visitors the advantages of ecotourism.
• The guide must fill in the logbooks and surveys that enable the dive center to maintain quality standards, as well as for biological investigation purposes.

VII. ARRIVAL AT THE BEACH

• Upon arrival at the beach, the captain will inform the dive center the arrival time.

OBSERVATION DIVE

I. Offshore diving will only be permitted at a minimum depth of 14 mts and maximum of 20 mts for 40 minutes, at a 50 range of distance from the attraction dive site.

II. Maximum number of visitors per boat: 20

III. There should be groups of six divers under the responsibility of two specialized guides.

IV. The observational guide must use a buoy along the tour to avoid other groups from interfering with the dive.

V. It is prohibited to perform the dive in a depth shallower than 14 mts or deeper than 20 mts.

VI. If a diver has a descent problem or during the dive, the assistant guide must help him/her to ascent to the surface.

VII. It is prohibited to attract sharks using harpoons, food, blood or any type of waste.

VIII. Guides must prevent visitors from having direct contact with sharks or the marine fauna in general.
DIVING PROCEDURES

I. WATER ENTRANCE

- The captain must make sure that they are on the designated BS observational dive site.
- At the diving site, the guide will give the signal to every visitor to start their equipment, go through the dive plan and the rules of conduct. After that, the guide will make sure that everyone is properly equipped and he will follow to equip himself.
- The entry procedure (backwards or giant step) will depend on the guide’s criteria.
- The captain must make sure the boat’s motor is in neutral prior to diver’s descent.

II. DESCENT TO THE WATER

- Bottom time and dive depth will depend on the diver’s certification and experience.
- At the water, and prior to descent, the group will remain close together and will give the “OK” sign to the guide and proceed to descent in a controlled manner to the dive site at the bottom.

III. DIVE

- Observation dive must be drifting thus by expanding the diving area there is a higher probability to find sharks. Also this modality prevents sharks from confusing observational divers with divers anchored at the bottom and their diving formation of attraction dive.
• In the event of a shark invading your personal space, the visitor must blow bubbles to try and scare the shark. Direct contact must be the last option, however, if needed, the observational guide will proceed to poke the shark with an alluminum spear inviting the shark to leave.

• Divers must leave 1 mt of distance from the bottom upon arrival at the observation BS dive site.

• The dive must follow the current. This modality is the same as any reef dive, although it is important to remain close together as one group.

• The guide must position himself/herself at the front and must check that conduct rules are met and that no one splits from the group.

• Olfatory and auditive attraction activities must follow the same procedures previosuly described.

ATTRACTION DIVE

I. This type of dive will be done within a 23-27 mts depth range.

II. Maximum bottom time of 20 minutes.

III. The group shall remain static at the bottom.

IV. The group will form a line at the bottom and the will be flanked by the attracting guide and the assistant security guide.

V. Guides must place the group in a spot that prevents bait from being pushed to them thanks to the current.

VI. Bait must come from a socially responsable provider and they shall be species that come from the gulf of Mexico or the Caribbean Sea.
VII. Sharks won’t be fed with “coronado” (*Seriola dumerili*) to avoid a food frenzy.

VIII. It is prohibited to use guts or fish blood to attract sharks during the diving activity. The use of this attractor is exclusively for authorized personnel and only during visitor absence.

IX. It is recommended to use defrosted, washed and bloodless “jurel” or “bonito”.

X. It is permitted to use a maximum of 2.5 kgs of bait per dive.

XI. In order to guarantee a better handling of the bait, fish chunks should be bigger than 10 cms in length.

XII. The attraction guide will place himself/herself between two to five meters from the visitors and current wise.

**SPECIALIZED ASSISTANT OF ATTRACTION GUIDE**

I. The assistant guide is responsible for everyone’s safety, including the attraction guide’s.

II. The maximum number of visitor pero assistant will be of 6, including the attraction guide.

III. The assistant guide must descent and position the divers at the bottom.

IV. The assistant must inspect the area with the alluminum spear for any type of marine fauna in order to avoid accidents.

V. He must be attent to the diver’s behaviour and the guides.

VI. May cancel the dive if it is found insecure.

VII. He must remove any floating bait that may put everyone’s safety at risk.

VIII. He must be attent to the visitor’s air supply.

IX. He must make sure that the shark’s escaping trajectory is not blocked.
X. At the end, he must make the safety stop respecting the no-decompression limits.

SPECIALIZED ATTRACTION GUIDE

I. He must assess the sharks and diver’s behaviours and perform the attraction activity based on the participant’s safety.

II. He must be aware of the shark’s behaviour. Pectoral fins pointed downwards, rapid movements and muscular tension are indicators of possible excitement increment in the shark.

III. Food supply must be given based on shark behaviour. If a frenzy occurs, attraction activity will be cancelled and, if necessary, the dive as well.

IV. If there was not any current and poor visibility, food supply will be limited for safety precautions.

V. Once the activity is finished and three minutes prior to ascent, the container will be sealed and tied to an inflatable buoy that will be sent to the surface for the captain to retrieve it. This will let the captain know to start detachment maneuvers.

VI. It is prohibited to use harpoons to catch fish and attract sharks.

VII. The attraction guide will not allow unauthorized personnel to use bait.

VIII. It will be sought to avoid direct contact with the sharks as well as with marine fauna in general.

IX. In the event that natural conditions are not appropriate or that sharks have a potentially dangerous behaviour towards visitors, the dive will be cancelled and the area will be cleared in a paced and safe manner.
ATTRACTION DIVE PROCEDURES

I. WATER ENTRY

- The captain must make sure that there are no other boats using the interactive attraction dive site. If it is so, he will proceed to attach the boat to the waiting buoy and wait until the bait container from the previous group is out of the water.
- The presence of the bait container at the surface is an indicator for the captain that he may begin dettaching the boat from the waiting buoy and attach it to the descent buoy.
- At the dive site, the assistant will give the signal to the divers to start preparing their equipment, go through the diving plan and conduct rules. This time lapse will allow any traces of previous bait to dissipate.
- The assistant will make sure that everyone is wearing the equipment properly, then he/she will follow to equip himself/herself.
- The entry procedure (backwards or giant step) will depend on the type of vessel and the guide’s criteria.

II. WATER DESCENT

- Maximum bottom time will be of 25 minutes, and the activity will be performed within a 23-27 depth.
- For the attraction dive, a fixed dive is due. Prior to descent, divers must signal “OK” and form a compact group. The assistant guide will choose the most adequate descent to the dive site.
- Underwater, the group shall remain static at the bottom forming a line flanked by safety divers and current oriented.

III. DIVE

- For the fixed point dive, it is important to anchor yourself at the bottom using extra weights (2 kgs) and also using a fixed line from which divers will hold.
- Prior bait handling, the security guide and the assistant will verify that clients are positioned in a correct manner, as well as assessing shark behaviour.
ANEX I: EMERGENCY PLAN

ACCIDENT

Bottom responsible: guide

Release yellow buoy

First Aid

Surface transfer

First aid on board

Evacuation

Detailed report of the accident

Surface responsible: Captain

Start emergency notification protocol

Emergency kit preparation

Detachment and search start
EMERGENCY PLAN

In the event of an accident involving any of the visitors, the guide or diver should do as follows in the emergency plan.

1.- LEAD YELLOW BUOY: When noticing a bite to any of the divers, the yellow buoy will be released initiating the emergency protocol. This buoy will be the signal for the captain to notify the dive center, which in turn should notify the clinic, emergency services, hyperbaric chamber and navy to send a support boat.

2.- FIRST AID: In the event of an open wound in the body, the closest diver to the injured person must minimize blood loss and prioritize ascent to surface. The most important thing is to get the diver to the surface as soon as possible by applying direct pressure to the wound, and control bleeding. The captain shall prepare the emergency kit and clear the cover to receive the injured diver. Once the emergency kit has been prepared, the captain must release the boat from the landing buoy and proceed to the yellow emergency buoy.

3.- TRANSFER TO SURFACE: The other guide will take care of the rest of the group, by direct contact to the rope of the buoy to avoid interference with the evacuation procedures. Even on the surface, visitors should wait at the buoy rope until they reach the boat that will take them to the beach.

4.- FIRST AID AND INJURY EVALUATIONS: Once out of the water, the guide and the captain will help the wounded to board the boat. Inside of the boat the injured will be lied down and the situation will be evaluated. In case of being a serious injury, an hemostatic agent bandage will be placed as well as a pressure point to control the bleeding; the oxygen mask will also be needed. The vessel with the wounded will collect the rest of the group, unless the support vessel is already
on the site. Both will move immediately to the nearest designated point for ambulance access, where a group of paramedics and an ambulance will be waiting for the injured to stabilize the injured and to take him/her to the hospital.

5.- DETAILED REPORT OF THE ACCIDENT: A detailed and chronologically correct report will be written explaining what happened during the accident, as well as the auxiliary actions taken by the authorized personnel. This report will be given to the permit holder and the authorities.

FIRST AID KIT COMPONENTS

1x silver self-adhesive tape

• 2x Indentable Sharpie Seals

• 1x medical scissors

• 2x Nitrile Gloves

• 1x hypoallergenic medical tape

• 2x Elastic bandages

• 2x H & H Primed Gauze Compressed Gases

• 2x Gates with hemostatic agent brand QuikClot Combat
ANEX II: SCHEME OF EXCLUSIVE INTERACTION DIVING

SITE AND SCHEDULES

SCHEDULES

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Modality</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td>10:30</td>
<td>Watching</td>
</tr>
<tr>
<td>10:30</td>
<td>13:00</td>
<td>Atraction</td>
</tr>
<tr>
<td>13:00</td>
<td>15:00</td>
<td>Watching</td>
</tr>
<tr>
<td>15:00</td>
<td>17:00</td>
<td>Atraction</td>
</tr>
</tbody>
</table>
### ANEX III: LOGBOOK FORMAT

#### Bull shark diving at Playa del Carmen: logbook

<table>
<thead>
<tr>
<th>Date:</th>
<th>Observer:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time:</td>
<td>Dive Shop:</td>
</tr>
<tr>
<td>Dive Site:</td>
<td>Reg. Number:</td>
</tr>
</tbody>
</table>

**Surface Conditions**

<table>
<thead>
<tr>
<th>Air temperature:</th>
<th>°C:</th>
<th>°F:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloudness %:</td>
<td>(0=nothing; 1=weak; 2=Strong; 3=Very Strong)</td>
<td></td>
</tr>
<tr>
<td>Wind speed:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wind Direction:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Underwater Conditions**

<table>
<thead>
<tr>
<th>Water temperature:</th>
<th>°C:</th>
<th>°F:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visibility:</td>
<td></td>
<td>(Visibility: 0-3 m=Bad; 3-10 m=Regular; 10-20=Good; +20 m=Excellent). (Current strength: 0=nothing; 1=weak; 2=strong; 3=very strong).</td>
</tr>
<tr>
<td>Surf:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermocline and depth:</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Number of divers:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Shark sightings**

| Number of sharks: | |
| Gender:           | Females (Mark x for pregnants): |
|                   | Males: |
| Status:           | Juvenile |
|                   | Mature |
| Food quantity (Kg): | |
| Associated fauna: | |
| Conspicuous characteristics: | |
| Photographs and videos (archives, author): | |
ANEX IV: INFORMATION THAT MUST BE TRANSMITED TO THE VISITORS DURING DIVE BRIEFING SESSION

Information in regards to any bull shark diving activity

- Bull Shark diving safety measures
- Bull shark behaviour
- Rules of conduct during the activity
- Group positioning (fixed/with current)
- Bull shark biology and ecology
- Worldwide threats that bull sharks face
- Bull shark diving as a conservation tool
- Investigation about bull sharks within the area

Additional information about attraction dive

- Site name
- Site description, bottom type, visibility and currents
- Dive plan
- Water entry and exit tactics: quick and all together
- Immersion procedure, free descent.
- Underwater group formation: always flanked by the shark feeder and the assistant guide
- Emergency procedure
- Signaling and underwater communication check
- Dive partner assignment
- Environmental conditions description
PARTICIPATING DIVE SHOPS
THIS HANDBOOK WAS MADE POSSIBLE THANKS TO COLLABORATING EFFORT OF:

- Saving Our SHarks, A. C.
- RAZONATURA, A. C.
- APSA
- Diving community at Playa del Carmen, Q. Roo

WORKSHOPS COORDINATION AND INFORMATION DATA BASE

- Ixchel García Carrillo – SOS, A. C.
- Olmo Torres Talamante and Kim Ley Cooper – Razonatura, A. C.
- Alfonso Torres – APSA, A. C.

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- Olmo Torres Talamante – Razonatura, A. C.

TECHNICAL EDITION

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- Jaime Manuel González Cano – CONANP
- Edgar Mauricio Hoyos Padilla – Pelagios Kakunja, A. C
- Jorge Carlos Loria Correa – Phantom Divers
- Alberto Friscione Carrascosa – Solo Buceo
SPECIAL THANKS TO:

To the conferencists and bull shark diving specialists

- Jorge Carlos Loria Correa – Phantom Divers
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- Mike Newman – Bequa Divers
- Neil Andrea – Neptunie

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- Dr. Mauricio Hoyos – Pelágios Kakunja, A. C.
- Ocean. Giacomo Palavicini – Shark Legacy Project
- Biol. Clara Calatayud – CIBNOR
- Dr. Jaime Manuel González Cano – CONANP

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- Kim Ley – Collective Brand

Authorities:

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- SEMARNAT
- CONANP
- SOLIDARIDAD MUNICIPALITY COUNCIL
• SCT – PORT CAPTAINCY OF PLAYA DEL CARMEN