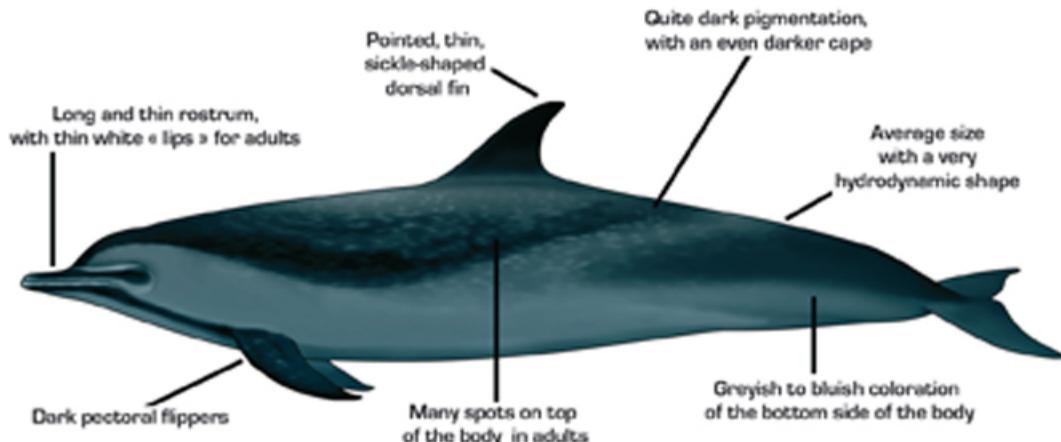


## Spotted dolphin (*Stenella attenuata*)

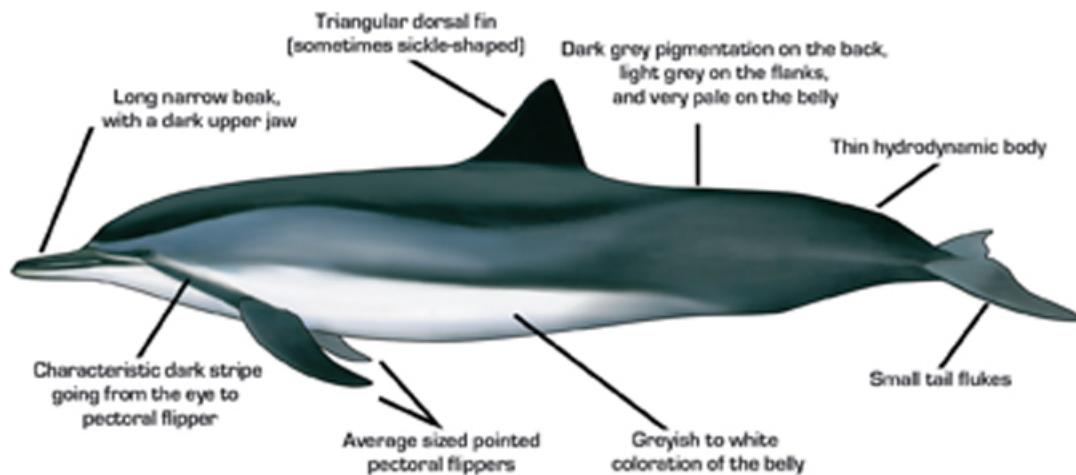


French name: Dauphin tocheté pantropical  
Size: 2 to 2.5 meters (6.6 to 8.2 feet)  
Weight: 100 to 120 kg (220 to 265 pounds)  
Gestation: 11 months  
Nursing: 12-24 months  
Reproduction: 1 calf every 2-4 years  
Feeding habits: fish and cephalopods (squids)  
Social organization: groups of 20 to 100 individuals; possible association with spinner dolphins  
Status of the species: minor concern  
Distribution in French Polynesia: present in the Marquesas (2<sup>nd</sup> most common species) and in the Tuamotu Islands, inshore or offshore



Because spotted dolphins of the triangle Hawaii - Mexico - Peru live in community with spinner dolphins and yellowfin tunas (*Thunnus albacares*), fishermen use them to spot fish schools, and purposefully catch them in their fishing nets.

## Spinner dolphin (*Stenella longirostris*)



French name: Dauphin à long bec  
Size: 1.6 to 2.4 meters (5 to 7 feet)  
Weight: 55 to 80 kg (120 to 175 pounds)  
Gestation: 10-11 months  
Nursing: 12-24 months  
Feeding habits: mesopelagic fish and cephalopods (squids)  
Social organization: groups of 20 to 100 individuals; possible association with spotted dolphins  
Status of the species: insufficient data  
Distribution in French Polynesia: Inshore in the morning and a little bit further offshore in the afternoon.  
Present all year in the Society Islands, the northern Tuamotu Islands and Marquesas Islands;  
very seldom presence in Austral Islands

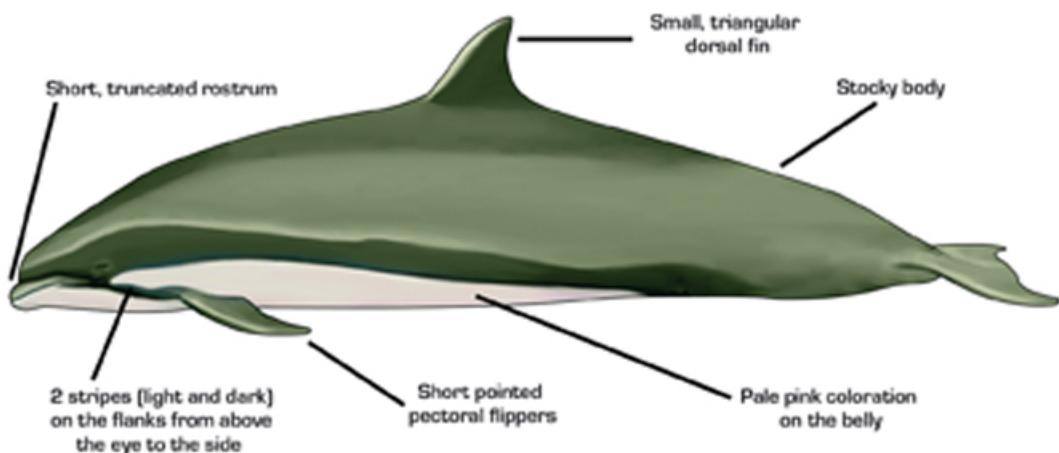


The spinner dolphin has more teeth than any other mammal: between 180 to 250.

Very fast and acrobatic, he can rotate up to 5 times in the air during a single spin, can do 7 spins in a row, and can jump up to 3 meters (9 feet) high.

This is the only dolphin that is encountered daily in bays or passes in the Society Islands.

**Fraser's dolphin**  
*(Lagenodelphis hosei)*



French name: Dauphin de Fraser

Size: 2 to 2.5 meters (6.5 to 8 feet)

Weight: 160 to 210 kg (350 to 460 pounds)

Gestation: 10-12 months

Reproduction: 1 calf every 2 years

Feeding habits: fish, squids and crustaceans

Social organization: in groups of 25 to 100 individuals. Frequently observed with melon-headed whales and sometimes with rough-toothed dolphins. Observed offshore.

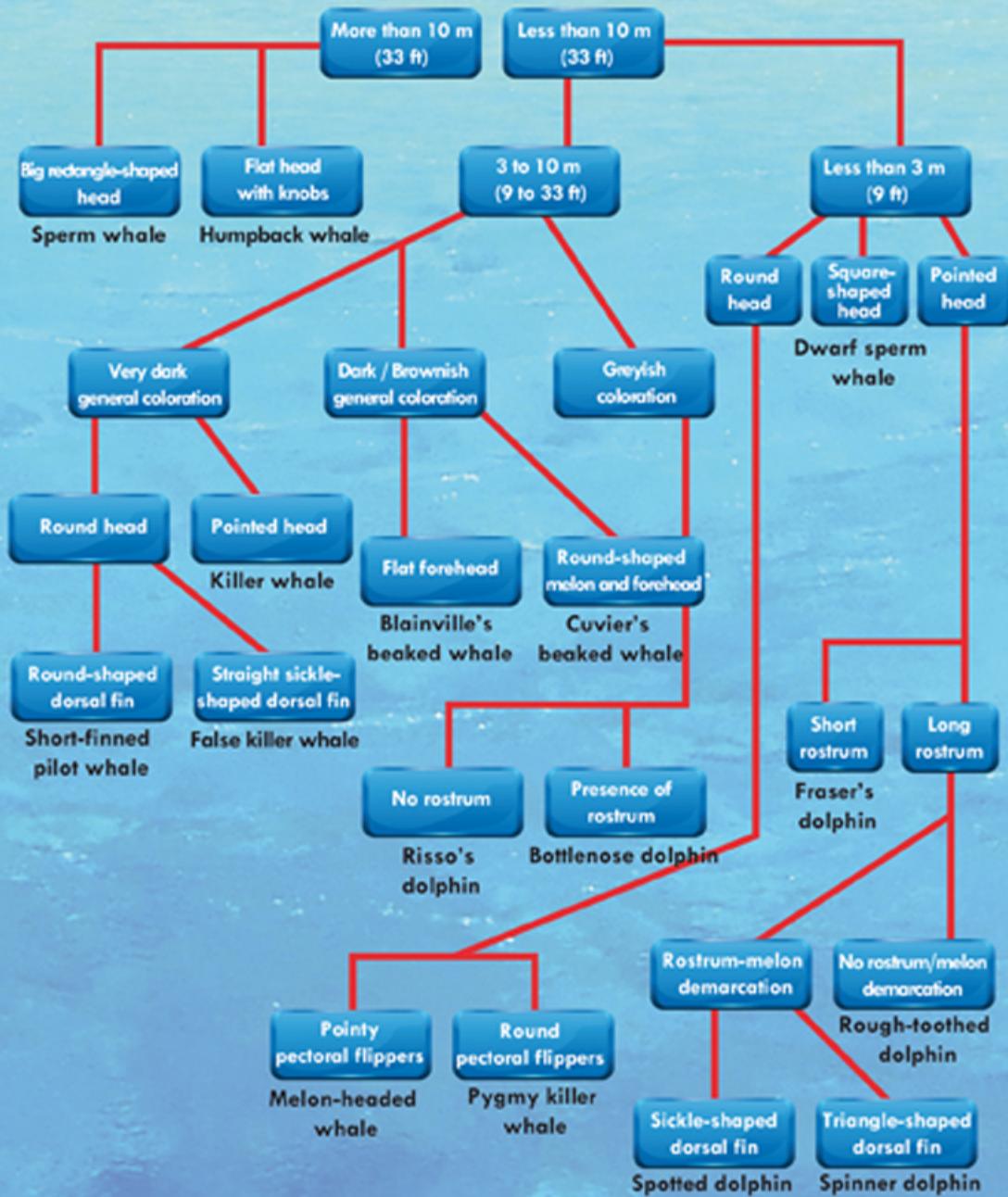
Status of the species: minor concern

Distribution in French Polynesia: present in Marquesas and Society Islands



Fraser's dolphin was first described in the 1950s and not observed in the wild until the 1970s.

## DETERMINATION OF SPECIES



## Other species

Occasionally, other species can be observed in French Polynesia.

### Mysticetes :

Blue whale (*Balaenoptera musculus*)

Bryde's whale (*Balaenoptera brydei*)

Common minke whale (*Balaenoptera acutorostrata*)

Others are probably in Polynesia, but never or very rarely been observed:

### Mysticetes :

Fin whale (*Balaenoptera physalus*)

Sei Whale (*Balaenoptera borealis*)

### Odontocetes :

Pygmy sperm whale (*Kogia breviceps*)

Dwarf sperm whale (*Kogia sima*)

Striped dolphin (*Stenella coeruleoalba*)

Common dolphin (*Delphinus delphis*)

Longman's beaked whale or Indo-Pacific whale (*Indopacetus pacificus*)



## III- DOLPHIN AND WHALE WATCHING

### 1 - Dolphin and Whale Watching around the world

« Dolphin and Whale watching » is a commercial activity based on recreational observation of cetaceans in their natural environment; mostly from motorboats.

This activity first appeared along Californian coast of the North America in 1955. Later, it spread to 40 countries.

In French Polynesia, its development started and intensified in the 1990', to become today a major commercial activity. If Dolphin and Whale Watching is often described as an « eco touristic activity », it is important to notice that this description isn't based on any local or international indicator or reference system.

Dolphin and Whale Watching has to reconcile socio-economic development and respect for the environment and of the animals in order to be part of a sustainable tourism process. Poor management could lead to profound perturbations of cetacean groups, and, therefore, endanger the sustainability of the activity.

Many studies around the world on Dolphin and Whale Watching show that boats do influence animals' behavior in their natural environment. It has been demonstrated that this activity can sometimes decrease resting, hunting and socialization by increasing displacement or movement. Indeed, changes of speed, direction, dives, aerial behaviors, and vocalizations have been observed.

Those modifications in animals' behavior can be good indicators of their vulnerability.

Studying them can permit us to have a better idea of the impacts on populations and to be able to adopt appropriate conservation measures. Therefore, specific regulations and « guides or conventions of good conduct » have been edited around the world. Many tourist operators work now in close collaboration with territorial or national services, scientific institutions and local associations in order to combine tourists' education and awareness with the collection of scientific data in a way that is respectful for the animals.



## 2 - Regulation of Whale Watching in French Polynesia

In 2002, a marine mammal sanctuary was created (Article A 121-3 of the Environment Code of the French Polynesia) accompanied by laws that regulate approaching marine mammals for scientific or commercial purposes.

### 3 - Administrative Procedure to obtain an authorization for Commercial Dolphin and Whale Watching activities:

#### **Life saving and 1<sup>st</sup> aid certificate**

PSC1 : French certificate of prevention d'accompagnement – level 1  
**Where to go :**

CCISM (Chambre de Commerce, d'Industrie, des Services et des Métiers) (French Department of commerce, industry, services vocations)  
Tel : 47 27 44  
[www.ccism.pf](http://www.ccism.pf)

#### **Conformance of the boat**

Registration and navigation license

**Where to go :**

DPAM (Direction Polynésienne des Affaires maritimes) (Polynesian supervision of maritime concerns)  
Tel : 54 45 00  
[www.maritime.gov.pf](http://www.maritime.gov.pf)

#### **Management of tourists in the water**

**Exemple : ACPASRA :** Certificate of skills regarding prevention, assistance and life-saving ability of snorkelers  
**Where to go :**

Service de la Jeunesse et des sports (Department for sports and youth)  
Tel : 50 18 88  
[www.sjs.gov.pf](http://www.sjs.gov.pf)

#### **Insurances**

Certificate of professional civil liability

**Where to go :** insurance companies

#### **coastal boating permit**

Certification d'initiation nautique  
(Certificate of nautical initiation) CIN

BC 200 (Brevet Capitaine 200) (captain 200 certification)

**Where to go :**

Maritime Affairs Department  
Tel : 54 95 25  
IFMPC (Institut de Formation Maritime Pêche et Commerce) (Marine training institute of fishing and trading)  
Tel : 54 45 00

#### **Authorization for commercial Whale Watching**

Personal, limited (one year) permit

**Where to go :**

Direction de l'environnement (Environment Direction of French Polynesia)  
Tel : 47 66 66  
[www.environnement.pf](http://www.environnement.pf)

In return for receiving a permit, the operator has to:

- keep records of all observations of whales and dolphins,
- allow official agents (and especially those from the Environment Department) to have free access to inspect those records.



#### IV- HOW TO OBSERVE THEM ?

##### **From a boat**



**Advantages:** Good panoramic view; easy access to the water, proximity to animals, possibility to follow them and to use measurements devices.

**Disadvantages:** Time needed to travel and to find animals; technical and logistical constraints to reach open ocean; cost.

**Constraints :** The boat has to be suitable for open ocean navigation, easy to maneuver, comfortable, and must have a long-range fuel capacity.

The speed cannot exceed 15 knots in order to limit noise and potential risks of collision, and limited to 3 knots in the caution zone.

##### **From shore**



**Advantages:** Negligible cost and logistic constraints; possibility of good observations with proper equipment (binoculars, telescope...).

**Disadvantages:** The distance from the animals; difficulty of finding a good observation site; impossible to observe animals under water.

**Constraints :** The observation site has to be elevated, not far from the ocean, and with an easy access; the area observed has to be a commonly frequented area for cetaceans.

##### **From an aircraft**



**Advantages:** Very large observation area; easy access to open ocean; easy spotting of animals from the sky.

**Disadvantages:** Distance from animals; very high cost; logistical constraints.

**Constraints :** The aircraft has to be suitable for oceanic surface observations and for camera work.

##### **In the water**

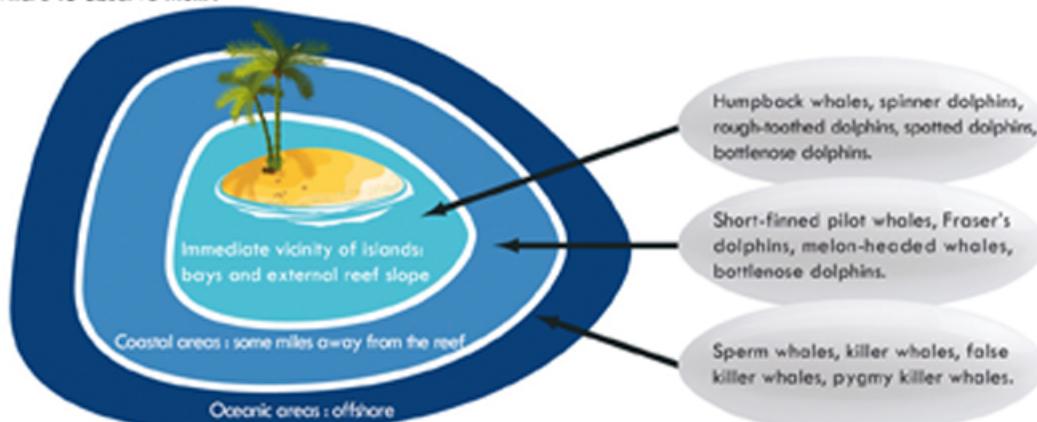


**Advantages:** Total view of animals; privileged view of animal swimming behaviors; proximity.

**Disadvantages:** Requires a means of transportation to go to the site; high vulnerability of the observer; optimal conditions are required to be able to slide in the water.

**Constraints :** Since it requires the ability to first spot animals from the surface, this method is ideal when paired with a boat. Being able to slide in the water depends on sea conditions, behavior of observed animals as well as many additional factors (presence of predators, numbers of boats on site, obligation to respect the approach laws...).

#### **Where to observe them ?**



#### **Some key sites to observe cetaceans in French Polynesia :**

- Tiputa pass at Rangiroa: a group of bottlenose dolphins have frequently been met by scuba divers.
- Bays and passes of Tahiti, Moorea, Huahine, Raiatea and Taha'a for spinner dolphins.
- Near shore areas of Marquesas Islands for many different species of dolphins.
- External reef slopes of Society and Austral Islands (Rurutu) for humpback whales.

## How to spot cetaceans ?



A visible blow (up to 3m-10 feet-high, for a humpback whale that can be spotted from miles away with binoculars).



Jumping animals, and splashes or eddies they create.



Dorsal fins or tails visible on the surface, sometimes from very far away.



An agitated school of fish on the surface or a group of diving birds can mean that a group of cetaceans is near by.

Ideal conditions to detect and observe : calm sea, no wind, sunny.

## V- EQUIPMENT REQUIRED FOR THE OBSERVATION OF CETACEANS

For an optimal observation of cetaceans, here is the material needed:



## VI- OBSERVATION AND APPROACH

The interpretation of cetacean behavior is a complex science. However, all cetaceans have four activity periods that the guide must be able to identify in order to adopt the appropriate observational behavior and method of approach.

Those 4 activities are: resting, travel, foraging and socializing.

They can be determined by the speed of movement, the duration of breath holding, and the physical activities of the animal.

**Resting:** This activity is identified by slow movement, animals being almost motionless; or by an extended time of stillness compared to normal. Examples: during this period, a humpback whale starts to become relatively motionless (speed less than 3 knots), swims slowly in different directions, remains underwater between 10 to 20 minutes (or more), and breaths 1 to 3 times in sequence at the surface.



**Travel:** It is characterized by the breathing rate and the speed of the animal. The unidirectional distance travelled is generally important. Example: Humpback whales move at around 3 to 5 knots, with a constant direction; they are submerged from 8 to 12 minutes and breath powerfully 3 to 6 times in sequence at the surface.

**Foraging:** This period of activity is dependent on the species observed, and varies even between different animals of the same species.

Example: some humpback whales knock out their prey by a huge tail slap or get underneath the school of fish and blow bubbles through their blowhole to encircle their prey. Then they rise back to the surface with the mouth open, swallowing thousand of fish on one time. But foraging by humpback whales can't be observed here in French Polynesia because they fast in tropical waters.

**Socializing:** Socialization requires the presence of other individual animals (even if they can't be observed at the same time). The speed of movement can be from very slow to very fast with variable direction. Socialization is often associated with repeated frolics at the surface (jumps, tail fluke, pectoral flippers slapping or with the singing of the males).



Observing cetaceans is done in 4 separate steps:

#### Observations from a distance - Approach - Closer observations - Departure.

##### 1 - Observation from a distance

This first observation step is necessary because it helps the guide to analyze correctly the situation, to establish the approach, to inform the guests, and to optimize the chance to observe and the observation duration. What should be done:

- Observe by respecting a caution area of 300 meters. Analyze the situation to get as many information as possible about the nature of the group of cetaceans observed: species, number of animals, presence of newborns, movement and activity.
- Quickly identify the activity phase of the group.

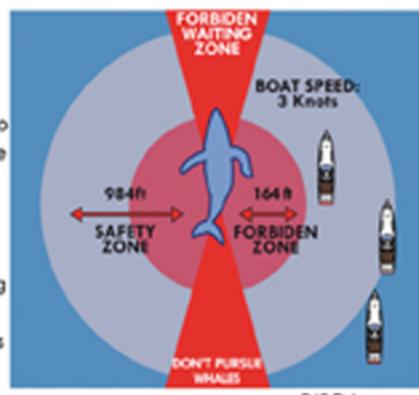


## 2- Approach

The goal of the approach is to allow the boat's (or plane's) passengers to stay at an optimal distance from the dolphins or whales to observe them and minimize any possibility of disturbance.

**What has to be respected by boat :**

- Don't go straight towards the group.
- Don't approach from the front or the back of the group, depending of the direction of the group.
- Approach by following a 30° angle relative to the group's heading.
- Respect a 3 knots speed close to the animals.
- Don't encircle the animals or separate any members of the group.
- Always keep the same heading or speed. Avoid any fast change of direction or engine speed.
- All the boats have to stay on the same side of the animals.
- Don't surprise the animals and be careful of the topography. Don't block the animals in between the reef and the boats, for example.
- If an animal voluntarily comes close to the boat, put the engine in neutral. But don't stop the engine in order to keep the boat ready to move and for the animals to be able hear out where the boat is.



Don't place yourself between a mother and its calf.



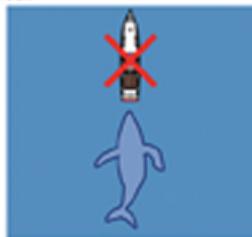
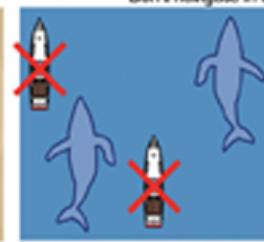
Don't navigate in the middle of a group, stay aside of it.



Don't encircle the animals.



Don't block the animal against the reef.

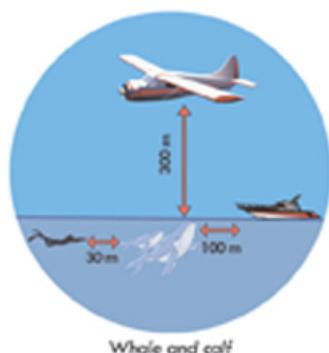


Don't place yourself in front of or behind the animals.

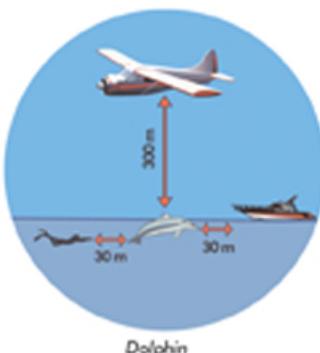


DIREN source

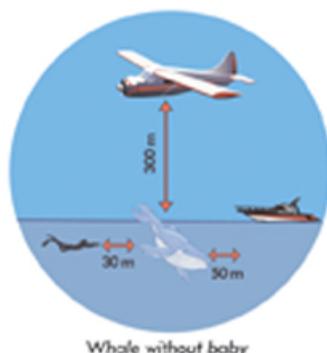
Minimum approach distances required by French Polynesian regulations between observers and cetaceans is defined:  
(Articles A 121-29 to 121-33 from the Environment Code).



Whale and calf



Dolphin



Whale without baby

DIREN source

The approach is successful if no change of the animals' behavior is noticed.

CAUTION: If avoidance by the animal is observed, stop the observation.



A good guide don't force the approach.

### 3- Closer observations

This step depends on the animals' reaction during the approach of the boat.



There are 3 types of reaction : avoidance, approach, indifference.

Example of **an approach** reaction :

The cetaceans come close, pass underneath the boat or get close to the front or the back of the boat.

Example of **avoidance** reaction :

The cetaceans go away from the boat, change direction, dive, go faster, etc.



Here are some disturbing signs requiring the cessation of the observation :

- Strong slap of flippers on the surface of the water.
- Variation in the speed of movement.
- Change of direction.
- Modification of dive times (breath holding).

**Never try to touch the animals, don't scream, don't tap on the boat.**

Sometime cetaceans come inside a lagoon or a bay. The reasons could be protection against oceanic predators, avoidance of over anxious males, and seeking calmer conditions within which to rest. In this situation it is important to keep a respectable distance from the animals, even greater than that required by law, especially if a whale is with a calf (risk of stranding).

#### 4 - Entering water

The law authorizes entering the water at a 30 meters security distance or greater. For the safety of people and the respect of the animals, a few rules have to be respected :

- Get slowly in the water (don't jump) in a group of 6 persons maximum.
- Respect the 30 meters minimum approach distance.
- Swim quietly without making bubbles or foam.
- Don't scream or make other noises, and minimize free diving underwater.
- The group of snorkelers remain together and on the same side of the animals as the boat.
- Don't try to get in between a mother and her calf.
- Don't try to touch the animals and don't try to feed them.



#### 5 - Departure

After the observation phase, leave the site slowly and adopt a straight line of navigation, clearly signaling a departure.

## VII- WHY GET INVOLVED IN SUSTAINABLE TOURISM ?

### 1 - A touristic asset

More and more tourists are looking for natural spaces housing an important biodiversity, synonymous of adventure and discovery. However the increasing environmental impact of tourism is difficult to reconcile with the safeguard of those natural habitats. All the actors involved (tourists, administrators, tourism professionals, governments and investors) have an interest to get involved in a sustainable exploitation of resources.

The attraction of tourism remains based on the richness of a territory and its biodiversity. Those issues pass to the public by making them sensitive to the respect of the animals via a well built and well focused educational message.



Themes that can be approached during the activity of whale watching:

#### Before observations

##### Natural heritage of French Polynesia

Example : remarkable species, endangered and protected  
Example : coral reef formation, types of islands (high, atolls...)

Example : Coral reef involvement in the conservation of biodiversity

##### Local context of the Islands

Example : types of activities observed in watersheds  
Example : other types of eco-touristic activities

##### Polynesian culture linked to the ocean

Example : legends linked to whales and dolphins  
Example : traditional fishing in the lagoon

##### Cetaceans in French Polynesia

Example : what is a cetacean ?  
Example : species found in French Polynesia

Example : accounts of rare encounters (killer whales, sperm whales ...).

Example : scientific studies undertaken for a better understanding of cetaceans

Example : natural and anthropogenic dangers encountered by cetaceans.

##### Regulations

Example : problems faced by tour operators (approach distances, speed...)

Example : French Polynesia's Marine Mammal Sanctuary (history, role ...)

#### During observations

##### Behaviors of animals

Example : ability to identify the different periods of activity  
Example : role of social interactions  
Example : types of foraging used by the animals

##### Species Identification

Example : identification and meaning of the name of the species  
Example : how to identify the species  
Example : description of their closest « cousins »

##### Species' biology

Example : the reasons for its presence in French Polynesia  
Example : their life cycle  
Example : their diet  
Example : their longevity, predators, maximum size  
Example : is it an endangered species ?



To further protect endangered or local species, it is necessary to know them better. Dolphin and Whale Watching excursions can provide to researchers a lot of information on abundance, distribution, and the ecology of the cetaceans in French Polynesia. Professionals and passionate navigators have the possibility to collect information that scientists can include in their databases.

### «Dolphin and Whale Watching» professionals can provide precious informations for researchers.

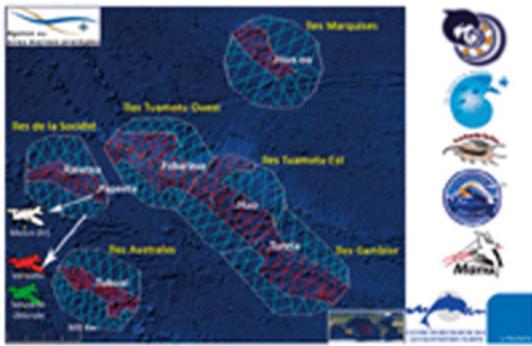
#### Example of a scientific study done in French Polynesia :

In 2011, France's marine protected areas agency contracted with the marine mammal research center of La Rochelle (CRMM) for a census campaign of the pelagic mega fauna (REMMOA) in French Polynesia.

Through aerial surveys and the collaboration of local non-governmental organizations, a group of observers was brought together for this purpose and it conducted an inventory on the distribution and abundance of marine mammals, seabirds, sea turtles, rays and sharks during four months.

The scientific goals were to determine habitats associated with high densities or high biological diversities of animals; to contribute to the identification of areas of human activities (fishing, maritime vessels traffic, trash ...), linked to the biodiversity, and define the priority areas for species conservation. One of the goals of this study is to inform the public about new discoveries and to educate the schools to the necessity of protecting the marine biodiversity of French Polynesia.

#### How to help scientists ?



Paths followed through the sampling by aircraft, except from the census program of mega marine wildlife through aerial observation (REMMOA) marine mammal research center - La Rochelle University (France) and France's Marine Protected Areas Agency.

Some data need a complex organization, administrative authorizations, and are non-compatible with commercial whale watching activities (example : attaching satellite tracking devices). However, other data, also important, could be collected with simple methods :

**Observation sheets:** should include at least: date, time, place, weather conditions, informations about the animals information, and GPS localization (or exact description of the locale) see annex.

**Acoustic recording:** this requires a specific material (hydrophone and recorder), and must be authorized by the Direction of the Environment.

**Photo ID:** taking pictures of the dorsal fin or tail flukes by using specific technics (parallel or perpendicular position to the body of the animal).



Exploitable pictures



Non-exploitable pictures

#### What to do with the collected data ?

In French Polynesia, the data collected by authorized professionals have to be transmitted to the Direction of the Environment (DIREN) which records them. Any observer can also give this information to organizations or associations comprising volunteers or scientists who are able to use the existing data in an educational or research goal.

## VIII- USEFUL ADDRESSES AND LINKS

### Ministries, territorial and national services

#### Marine Protected Areas Agency

Agence des Aires Marines Protégées

16 quai de la Douane - 29229 Brest Cedex 2

[www.aires-marines.fr](http://www.aires-marines.fr)

#### Direction of the Environment of French Polynesia (DIREN)

BP 4562 - 98713 Papeete

[www.environnement.pf](http://www.environnement.pf)

(689) 47.66.66

#### Tahiti Tourisme Group

BP 65 - 98713 Papeete

[www.tahiti-tourisme.pf](http://www.tahiti-tourisme.pf)

(689) 50.57.00

#### Scuba diving Group of Tahiti and its islands

BP 6014 - 98702 Faa'a

[www.diving-tahiti.com](http://www.diving-tahiti.com)

#### Ministry of the Environment

BP 2551 - 98713 Papeete

[www.environnement.gouv.pf](http://www.environnement.gouv.pf)

(689) 50.88.60

#### Ministry of Tourism

[www.tourisme.gouv.pf](http://www.tourisme.gouv.pf)

(689) 80.30.00

#### Direction of marine resources

BP 20 - 98713 Papeete

[www.peche.pf](http://www.peche.pf)

(689) 50.25.00

### Research centers and programs

#### Centre de Recherche Insulaires et Observatoire de l'Environnement de Polynésie française (CRIODE)

Center of Insular Research and Observatory of the Environment in the French Polynesia

BP 1013 Papetoai - 98729 Moorea

[www.criobe.pf](http://www.criobe.pf)

(689) 56.13.45

#### Institut Français de Recherche pour l'Exploitation de la MER (IFREMER)

French Institute of Research and Exploitation of the Sea

BP 7004 - 98719 Taravao

[www.ifremer.fr](http://www.ifremer.fr)

(689) 54.60.00

Station R Gump, Université de Berkeley, Californie

Richard B. Gump Research, University of Berkeley, California

BP 244 Maharepa - 98728 Moorea

(689) 56.13.74

<http://moorea.berkeley.edu>

#### Université de la Polynésie Française (U.P.F.)

University of French Polynesia (UPF)

BP 6570 - 98702 Faa'a

(689) 80.38.03

[www.upf.pf](http://www.upf.pf)

#### Marine Mammal Research Program

BP 698 Maharepa - 98728 Moorea

(689) 56.23.22

### Non profit Foundation - Organizations

#### GEMM

Groupe d'Etudes des Mammifères Marins

Group Marine Mammals Studies

BP 1 Tiputo - 98776 Rangiroa

(689) 77.90.99

[www.gemmpacific.org](http://www.gemmpacific.org)

#### Richesses du Fenua - Te anahotu

BP 4157 - 98713 Papeete

(689) 78.45.39

[www.tahitheritage.pf](http://www.tahitheritage.pf)

#### Te aroi' otia Nui

[www.tearaiotianui.pf](http://www.tearaiotianui.pf)

#### Te mana o te moana - Spirit of the Ocean

BP 1374 Papetoai - 98729 Moorea

(689) 56.40.11

[www.temanaotemanoa.org](http://www.temanaotemanoa.org)

#### Te ora naho - FAPE (Fédération des Associations de Protection de l'Environnement)

[www.teorahnaho.org](http://www.teorahnaho.org)

## Some useful websites



[www.accobams.org](http://www.accobams.org)

Website of the International agreement on the conservation of cetaceans in the Mediterranean sea.



[www.baleinesendirect.net](http://www.baleinesendirect.net)

All the news regarding whales of the Saint-Laurent, Canada; toolkits, pictures, movies and interviews with specialists.



[www.baleinenomade.com](http://www.baleinenomade.com)

The website of the passionate Pierre Follin, presenting his observations and pictures of whales in French Polynesia.



[www.cetace.info](http://www.cetace.info)

A website to discover, be informed or exchange information on cetaceans.



[www.cetaces.org](http://www.cetaces.org)

The website of the Group of Research on cetaceans. A special Guide for observers, scientists, publications, pictures...



[www.cites.org](http://www.cites.org)

The website of the Convention on the International Trade in Endangered Species of wild fauna and flora.



[www.environnement.pf](http://www.environnement.pf)

The Direction of the Environment's official website. Lots of information, tools, and the Code of environment with laws.



[www.iwcoffice.org](http://www.iwcoffice.org)

Website of the International Whaling Commission. Publications to download



[www.gemmpacific.org](http://www.gemmpacific.org)

Website of GEMM (Group for the Study of Marine Mammals of French Polynesia). Approach charter, pictures...



[www.iucn.fr](http://www.iucn.fr)

The website of the IUCN (International Union for the Conservation of Nature). To view: The red list of endangered species.



[www.temanaotemoana.org](http://www.temanaotemoana.org)

Website of the foundation Te mana o te moana. Information, educational activities, booklets...



[www.observatoirepolynesie.org/cetaces](http://www.observatoirepolynesie.org/cetaces)

Website created by Te mana o te moana, and dedicated to the Observatory of cetaceans in French Polynesia.

### Some references Books

- B. Arnould, *Requins, Baleines et dauphins*, Rouge et Or 1990.
- M. Carwardine, *Whales, dolphins and porpoises*, Smithsonian Handbooks 2002.
- M. Carwardine, *Guide to Whale watching in Britain and Europe*.
- M. Carwardine, E. Hoyt, R.E Fordyce et P. Gill, *Whales and Dolphins : the ultimate guide to marine mammals*, Editions Harper Collins, 1998.
- P. Clapham, *Humpback Whales*, Voyageur PressWorldlife library, 1996.
- L.C. Douaze, *Dolphins and whales*.
- P. Darmangeant, V. Levet, E. Mauris, *Baleines et dauphins*, Losange, Découverte nature Artemis 1999.
- Discovery Travel Adventures Books, *Whale Watching*.
- J.-D. Darling, K.-S. Norris, H. Whitehead, B. Würsig, C. Nicklin, *Whales Dolphins and Porpoises*, National Geographic 2000.
- A. Gannier, *Baleines et dauphins de Polynésie*, Collection Survol 2001.
- C. Garrigue, J. Greaves, C. Ledru, *Nouvelle-Cafédonie : un rendez-vous pour les baleines*, 2002.
- D. Lynch, P.L. Kordis, J. Vaillancourt, *La stratégie du dauphin*, Edition de l'homme 1994.
- W.F. Perrin, B. Würsig, J.G.M. Thewissen, *Encyclopedia of Marine Mammals*, Academic Press 2008.
- H. Shirihai, *Guide des mammifères marins du monde*, Delachaux et Niestlé Edition, 2006.
- H. Shirihai, B. Jarrett, M. Zucca, *Guide des mammifères marins du monde*, 2011.
- B. Sifaoui, *Le livre des dauphins et des baleines*, Albin Michel Editions, 2001.
- JP. Sylvestre, *Guide des dauphins et marsouins*, Delachaux et Niestlé, 1990.
- T. Zysman, *Tahora Baleines de Polynésie*, Téthys Editions 2011.

### References websites

- <http://www.cetoces.org/cetoces/polynesie-francaise>  
<http://www.martinique.ecologie.gouv.fr/AGOA/index.html>  
<http://nomadesdesocéans.free.fr/presentation.php>  
[www.baleinomane.com](http://www.baleinomane.com)  
<http://www.eleuthera.pf/spip/spip.php?rubrique13&lang=fr>  
<http://www.environnement.pf/spip.php?article105>  
<http://www.sanctuaire-pelagos.org/acceuil/index.php>  
<http://marinemammal.univ-lr.fr/observatoire.html>  
<http://www.obs-mam.org/acceuil>  
<http://ommag.byethost15.com/bilan/2009/bilan%2009.htm>  
<http://www.evasiontropicale.org>  
<http://www.globice.org>  
<http://web.moc.com/OCEAMM>  
<http://www.cites.org/fra/index.php>
- <http://www.operationcetoces.nc/index.php?page=le-guide-regional-pour-l-observation-des-baleines-et-des-dauphins-dans-les-îles-du-pacifique>  
<http://www.megaptero.org/observation-des-mammiferes-marins-aux-comores.html>  
<http://www.occobams.org>  
<http://www.iwcoffice.org>  
<http://www.oscobams.org>  
<http://www.whalewatch.com>  
<http://www.gremm.com>  
<http://www.baleinesen direkt.net>  
<http://www.cerace.info/les-actualites/article/bilan-du-stage-d-observation-des-cétacés-du-golfe-de-gascogne-de-septembre-2009.html>



## Extracts from the Code of the Environment

*« S/section 2. Espèces relevant de la catégorie B ».*

*A. Mammifères marins (Art. A 121-3 à 121-7) :*

*Création d'un sanctuaire des mammifères marins.*

**Art A 121-3**

Il est créé dans les eaux intérieures, la mer territoriale, ainsi que dans la zone économique exclusive de la Polynésie française, un sanctuaire pour la protection et la sauvegarde des baleines et des autres mammifères marins.

**Art A 121-4**

Conformément aux articles D 121-1 et D 121-3 du présent code, toutes les baleines et autres mammifères marins présents dans les eaux intérieures, la mer territoriale de la Polynésie française ainsi que dans la zone économique exclusive font l'objet d'une inscription sur la liste des espèces protégées, considérées comme rares ou d'intérêt particulier et relevant de la catégorie B.

**Art. A 121-5**

Au titre de la protection des espèces visées à l'article précédent, sont interdits : la mutilation, le harcèlement, la capture ou l'enlèvement, la consommation et la chasse, ainsi que la détention, le transport, l'importation et l'exportation. Toutefois, les interdictions de détention, de transport, d'importation et d'exportation ne concernent pas les animaux nés en captivité ayant fait l'objet d'une autorisation de détention. Par harcèlement on entend toute manœuvre ou activité d'observation qui aurait pour

conséquence de modifier le comportement des animaux, de les contraindre à changer de direction ou de vitesse, de durée d'immersion, de les faire fuir, ou de les bloquer contre le récif ou le rivage.

**Art A 121-6**

Les infractions aux dispositions précitées sont passibles des sanctions prévues par les dispositions du livre 1, titre 3, du présent code.

**Art A 121-7**

Les infractions à la réglementation sont constatées par toute personne agréée, commissionnée et assemblée à cet effet, et notamment des agents habilités de la direction de l'environnement.

**B. Approche des baleines à des fins scientifiques (Art. A 121-16 à 121-24).**

**Art. A 121-16**

En application des articles D 121-5 et D 121-6 du présent code, les activités d'approche, d'étude et de recherche, réalisées à des fins scientifiques, sur les baleines et autres mammifères marins, sont soumises à l'obtention d'un arrêté d'autorisation délivré par le Président du gouvernement sur proposition du ministre chargé de l'environnement (...)

**C. Approche des baleines et autres mammifères marins aux fins d'observation (Art. A 121-25 à 121-36).**

**Art. A 121-25**

En application du titre 1 et du titre 2 du présent livre, relatifs à la protection de la nature, les dispositions de la présente sous-section réglementent les autorisations d'approche des baleines et autres mammifères marins aux fins d'observation.

L'autorisation est requise dès lors qu'une personne physique ou morale, se propose d'exercer habituellement et/ou professionnellement, l'activité d'approche des baleines et autres mammifères marins.

**Art. A. 121-26**

La délivrance d'un arrêté d'autorisation aux fins d'observation de baleines et autres

mammifères marins est subordonnée à la présentation par les personnes exerçant habituellement des activités d'approche, et notamment les professionnels du tourisme, d'une demande adressée au ministre chargé de l'environnement qui en assure l'instruction et qui prend avis du ministre chargé de la recherche scientifique ainsi que du ministre chargé de la pêche.

**Art. A121-27**

La demande d'autorisation d'approche des baleines et mammifères marins adressée au ministre chargé de l'environnement mentionne : 1- s'il s'agit d'une personne physique : son identité, sa domiciliation, ses qualifications ;

2- s'il s'agit d'une personne morale : sa dénomination ou sa raison sociale, sa forme juridique, l'adresse de son siège social, la qualité du mandataire légal ;  
3- l'autorisation de transport de personnes, ainsi que l'attestation de responsabilité civile professionnelle ;

4- le permis correspondant à l'embarcation ou autre moyen de transport ;  
5- les noms scientifique et vernaculaire de l'espèce observée ;  
6- les conditions dans lesquelles s'effectue l'approche des spécimens ;  
7- le lieu et la période d'approche.

L'autorisation d'approche est temporaire, personnelle et inaccessible. Elle est délivrée par arrêté du Président du gouvernement.

La demande d'autorisation mentionnée à l'article précédent doit comporter l'engagement du pétitionnaire :

- à tenir un registre dans lequel sont consignées, au fur et à mesure, toutes les opérations d'observation des spécimens ;
- à permettre aux agents habilités des services, et notamment de la direction de l'environnement, le libre accès aux fins de contrôle de ce registre.

Un exemplaire du formulaire de demande et du registre sont annexés au présent paragraphe.

Le pétitionnaire doit retirer ces documents à la direction de l'environnement.

#### **Art. A 121-28**

La demande d'autorisation mentionnée à l'article précédent doit comporter l'engagement du pétitionnaire :

- à tenir un registre dans lequel sont consignées, au fur et à mesure, toutes les opérations d'observation des spécimens ;
- à permettre aux agents habilités des services, et notamment de la direction de l'environnement, le libre accès aux fins de contrôle de ce registre.

Un exemplaire du formulaire de demande et du registre sont annexés au présent paragraphe.

Le pétitionnaire doit retirer ces documents à la direction de l'environnement.

#### **Art. A 121-29**

Toute embarcation utilisée pour l'approche des mammifères marins doit suivre une route parallèle, dans la même direction de déplacement que les animaux. La distance minimum requise, entre l'embarcation et le mammifère marin, est de :

- 50 mètres pour les baleines, et 100 mètres si un baleineau est présent ;

- 30 mètres pour les dauphins et autres mammifères marins ;  
à moins que les mammifères marins ne réduisent volontairement la distance. Dans ce cas, le moteur des embarcations motorisées doit être mis au point mort, et non arrêté.

#### **Art. A 121-30**

Si l'observation est faite par plusieurs embarcations au même moment, ceux-ci ne peuvent encercler les baleines et autres mammifères marins. Ils doivent se tenir tous du même côté.

#### **Art. A 121-31**

Lorsque l'observation des baleines et autres mammifères marins se fait depuis un aéronef, la hauteur obligatoire entre ces appareils et les animaux doit être supérieure à 300 mètres.

#### **Art. A 121-32**

L'approche des baleines et autres mammifères marins par les nageurs et plongeurs doit se faire latéralement en respectant une distance minimum et permanente de 30 mètres.

#### **Art. A 121-33**

Lorsqu'une embarcation est utilisée pour l'approche des baleines et autres mammifères marins, les règles suivantes sont à observer :

- a. la vitesse d'approche ne doit pas être supérieure à 3 noeuds à l'intérieur d'un rayon de 300 mètres ;
- b. tout changement brusque de direction et de régime de moteur est interdit.
- c. l'utilisation des sonars, à des fréquences autres que celles utilisées normalement pour la navigation, est strictement interdite.

#### **Art. A 121-34**

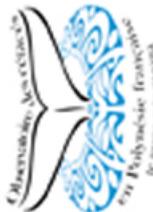
Des dérogations relatives à la distance mentionnées aux articles A. 121-30, A 121-31 et A 121-32 du présent code, à la vitesse des embarcations mentionnée à l'article A 121-33, peuvent exceptionnellement être accordées aux scientifiques et sur justification figurant dans la demande d'autorisation initiale.

#### **Art. A 121-35**

Les infractions aux dispositions précitées sont passibles des sanctions prévues par les dispositions du livre 1, titre 3, du présent code.

#### **Art. A 121-36**

Les infractions à la réglementation sont constatées par toute personne agréée, commissionnée et assermentée à cet effet, et notamment par les agents habilités de la direction de l'environnement.



## Fiche d'Observation cétacés en Polynésie française

Polynésie française  
de l'océan ou de l'île

### Identification

Nombre d'individus :	<input type="checkbox"/> Réel	<input type="checkbox"/> Approximatif	
Groupe :	<input type="checkbox"/> Compact	<input type="checkbox"/> Dispersion	
Présence de jeunes :	<input type="checkbox"/> Oui	<input type="checkbox"/> Non	<input type="checkbox"/> Si oui, nombre approximatif:
Spécie :	Balaenoptera edeni		
Autres espèces présentes ?	Frégate		
Taille : Inférieure à 7m	<input type="checkbox"/>	De 7 à 10m	<input type="checkbox"/>
	Plus de 10m		
Couleur :	<input type="checkbox"/> Blanc	<input type="checkbox"/> Noir	<input type="checkbox"/> Gris
Forme de la tête :	<input type="checkbox"/> Allongée	<input type="checkbox"/> Ronde	<input type="checkbox"/> Carrée
	<input type="checkbox"/> Pointue		
Forme du bec :	<input type="checkbox"/> Long	<input type="checkbox"/> Court	<input type="checkbox"/> Absent
Nageoire dorsale :	<input type="checkbox"/> Hauteur: Moins de 1m	<input type="checkbox"/> Plus de 1m	
Tronquière :	<input type="checkbox"/> Faible	<input type="checkbox"/> Arrondie	
Nageoire caudale :	<input type="checkbox"/> Recollie	<input type="checkbox"/> Courbée	
Souffle :	<input type="checkbox"/> Oblique	<input type="checkbox"/> Droit	<input type="checkbox"/> En V
Saut :	<input type="checkbox"/> Horizontal	<input type="checkbox"/> Vertical	<input type="checkbox"/> En vrille
Comportement :	Stationnaire	<input type="checkbox"/> S'approche	<input type="checkbox"/> Faitant
Surfe à l'épave :	<input type="checkbox"/>	<input type="checkbox"/> Se tient à distance	

### Observateur

Nom de l'organisme:  
Nom du bateau:  
Nom de l'observateur:  
E-mail:  
Téléphone:  
Nombre de personnes à bord du bateau:  
Nombre de baleines grisées vues autour de l'embarcation:

### Observation

Date (jj/mm/aaaa) :  
Heure de début d'observation :  
Heure de fin d'observation :  
Ile et district :  
GPS : Latitude:  
Longitude:  
Fin d'observation : Départ de l'animal  
Départ du bateau  
Prise de photo/vidéo : Oui  Non

### Conditions météo :

Vent :  Faible  Modéré  Fort  
Mer :  Calme  Agité  Très agité  
Ciel :  Clair  Nuageux  Pluvieux

Vos remarques !  
(signes particuliers : cicatrices...)/comportement : (excessif...)

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## Observation Sheet for Cetaceans of French Polynesia

Te Mana o te Moana  
Whale Watcher

### Observer

Name of the whale watching operator and boat name:

Name of the boat:

Name of the observer:

Mailing address:

Phone:

Number of people onboard:

### Sighting

Date (dd/mm/aaaa):

Time at the beginning of the observation:

Time at the end of the observation:

Island and district:

Longitude:

End of the sighting: Departure of the animal

Departure of the boat

Pictures/movies: Yes

No

### Sighting conditions:

Wind: Moderate

Rough

Very Rough

Wavy

Ocean: Calm

Clear

Cloudy

Sky: Clear

Partly cloudy

Cloudy

### Your comments: (Distinguishing features: examples: scars... / behavior: sex / aggressive...)

Jumps: Horizontal

Vertical

In spin

Behaviour: Still

Approach

Traveling

Surf at the bow

Scary / angry



45