



Guidelines for
Interactions with
Cetaceans and
Dugongs in
Timor-Leste

Legal and Management Basis

Relevant Laws

1. Constituição da República Democrática de Timor-Leste, Artigos 6 Objectivos do Estado, Alínea f, Proteger o meio ambiente e preservar os recursos naturais;
2. Constituição da República Democrática de Timor-Leste, Artigos 139 Recursos naturais
3. Decreto Lei Governo N.º 6/2004 de 21 de Abril, Bases Gerais do Regime Jurídico da Gestão da Pesca e Aquicultura
4. Decreto do Governo N.º 5 /2004. de 21 de Julho. Regulamento Geral de Pesca
5. Decreto-Lei N.º 6/2020 de 6 de Fevereiro Regime Jurídico da Proteção e Conservação da Biodiversidade
6. Diploma ministerial conjunta N.º 18/MAF/MCIA/II/2017 12 Abril, Lista das Species Aquaticas Protegidas
7. Diploma Ministerial N.º 6/42/GM/II/2005 Koima ba infrasaun Peska

Management Considerations recommended by South Pacific Regional Environment Programme (SPREP) and Conservation International (CI)

To minimize the risk of adverse impacts caused by whale, dolphin and dugong watching and to ensure the sustainable development of this industry, accurate management strategies need to be implemented. Several tools and approaches should be considered:

- All commercial whale, dolphin and dugong watching vessels, operators and all tour guides should be legally registered to undertake commercial activities in Timor-Leste waters;
- Ensure all whale, dolphin and dugong watching vessels are legally registered and regularly inspected, with appropriately trained crew to undertake safe maritime and *in-water* activities;
- National licensing or permitting scheme to regulate the number and size of vessels, standards of operation, including species-specific and site-specific requirements;
- A special permit needed for research or commercial photography and cinematography;
- Management measures that include closed seasons, 'no go' areas, and 'no approach times' to provide additional protection to critical habitats, populations, and individuals;
- Further assessment of the numbers, distribution and other characteristics of the target population/s before the implementation of tourism operations to establish the feasibility of the industry and a baseline for monitoring;
- Baseline monitoring of cetacean populations and interactions, including establishment of mandatory reporting system for operators to monitor the sustainability and effectiveness of management provisions and modify them as required to reflect new information and circumstances;
- Establish an enforcement framework to ensure compliance with management provisions, including through customary marine tenure systems;
- Ongoing scientific research, socio-economic monitoring, assessment of potential impacts on cetaceans, and collection and sharing of information by all stakeholders;
- Disseminate these guidelines, best practice information and research outcomes to improve public awareness, including amongst recreational and commercial boat owners;
- Ongoing whale watching operator training and accreditation programs on the biology and behavior of target species, best practice whale watching operations, and the management provisions in effect;
- Encourage, support and protect communities' participation and ownership of the whale watching industry;
- Mandate educational standards for the provision of accurate and informative material presented by local operators and guides to whale watch participants

Overarching principles

The waters of Timor-Leste are important for a great number of cetaceans (whales and dolphins) and dugong. For some as a permanent habitat, for others, a breeding or feeding ground or a migration corridor. Currently, more than 26 species of whales and dolphins and dugong have been identified in this area in very high abundance and in mixed species pods. This is a unique occurrence that is not yet well understood.

The presence and diversity of cetaceans in our waters has led to the development of whale and dolphin watching, both on a commercial and small-scale basis. Whale and dolphin watching is defined as viewing activities in the natural environment, of any cetacean species from land, sea or air. If managed well, this activity can provide a sustainable, long-term income for local communities, particularly fishing communities. Which can reduce potential damaging activities, such as the harvesting of whales and dolphin species, which is currently being undertaken in the waters of Indonesia, close to Timor-Leste. In contrast, whale and dolphin watching is a low-impact, sustainable activity with the potential to generate significant long-term economic benefits to communities, contributing to their sustainable development.

In order to ensure the conservation of whales and dolphins and dugongs in Timor-Leste, it is our responsibility to minimize the disturbance caused by our presence. Towards that goal, these best practice General Guidelines have been produced. Their purpose is to ensure the sustainable development of the whale and dolphin watching industry by minimizing impacts and maximising education. They apply to all types of whale, dolphin and dugong watching, including dedicated, seasonal and opportunistic commercial operators, and recreational vessels.

The overarching principles of these guidelines are:

- Ensuring the conservation of cetaceans and their habitats in Timor-Leste.
- Ensuring a precautionary approach to the development and management of whale watching.
- Minimizing the impact of whale, dolphin and dugong watching activities.
- Promoting and respecting cultural values of whales, dolphins and dugong, and the marine environment to local peoples.
- Providing long-term economic benefits and opportunities to local communities.



Disturbance

Cetaceans and dugong may be disturbed by the presence of people, vessels or aircrafts.

Whale, dolphin and dugong watching activities can potentially cause long-term disturbance to cetacean populations, which include:

- Disruption of behaviour (e.g. feeding, nursing, mating, migrating);
- Displacement from important habitat areas (e.g. resting, feeding, breeding and calving areas);
- Long term stress;
- Injury;
- Reduced breeding success;
- Increased mortality.

Changes in the behaviour of whales, dolphins and dugong, need to be recognised and acknowledged as such, so that animals can be left undisturbed. The following behaviours may indicate that a whale or dolphin is affected by our presence:

- Changes in swimming speed or direction (to avoid a boat);
- Changes in breathing/diving patterns;
- Stopping or changing activity patterns (e.g. vocalizing, feeding, nursing, socialising);
- Changes in group size and cohesion;
- Changes in acoustic behaviour; and
- Surface behaviours such as peduncle tail throws, and trumpet blows.

Populations, and individual cetaceans and dugongs may react differently depending on the species, their age, sex, and if accompanied by a calf. Always give more respect and distance if there is a calf present.



Interactions with Whales, Dolphins and Dugong

Persons shall always:

- Operate vessels, and aircrafts so as not to disrupt the normal movement or behaviour of whales, dolphins and dugong.
- Stop any interactions with a cetacean or dugong at any sign of the animal becoming disturbed or alarmed.
- Allow cetaceans and dugong to determine the nature and duration of 'interactions'.

Therefore, the following recommendations need to be considered:

- Do not touch a cetacean or dugong.
- Do not feed a cetacean or dugong.
- Do not make any loud or sudden noises.
- Do not make sudden or repeated changes in direction or speed.
- Dedicated observer(s) should be on duty in addition to the captain of the vessel.
- Do not place a vessel up wind of, or in a position where it will drift into, the no-approach zone.

When vessels are within the caution zone of whales, dolphins or dugongs:

- Approach cetaceans and dugongs slowly and cautiously.
- Observe cetaceans and dugongs at a speed not exceeding the speed of the animals.
- No more than 3 vessels should be in the caution zone of a whale, dolphin or dugong, at a time.
- Leave boat engine on and in idle when watching cetaceans or dugongs.
- Do not disperse or separate a group of cetacean or dugong.
- A vessel should not chase, encircle, block the direction of travel of cetaceans or dugong, or position itself in the middle of a pod.
- A vessel should not undertake 'leap-frogging' or 'J-maneuvers' on an individual, pair or cetacean pod.
- If cetaceans or dugongs approach a vessel, slow down gradually and put engines in idle.
- If cetaceans approach a vessel to bow-ride, maintain a slow and steady speed and avoid sudden changes in course.
- When departing from watching cetaceans or dugongs, determine where the animals are relative to the vessel to avoid collisions or coming too close to the animals, and increase speed gradually while exiting the caution zone.

JB



Vessels

Prohibited vessels

Certain vessels should not be used for whale, dolphin and dugong watching. These include all personal motorized watercraft (e.g. jet skis and similar crafts, and underwater vessels), parasail, remotely operated craft, wing-in-ground effect craft, hovercraft, windsurfers, kite surfers.

Allowable vessels

Vessels recommended for use in whale, dolphin and dugong watching include all other motorized and/or sail craft (e.g. motorboats, yachts, inflatable craft), as well as aircrafts and helicopters.



Angles and distances of approach

The most appropriate method for approaching a whale, dolphin or dugong is from the side and slightly to the rear of the animal. Avoid approaches from head-on or directly from behind.

Caution zone

- For whales, the caution zone is the area within 100m from an adult whale (300m when a calf is present)
- For dolphins and dugongs, the caution zone is the area within 50m from an adult dolphin or dugong (300m when a calf is present).

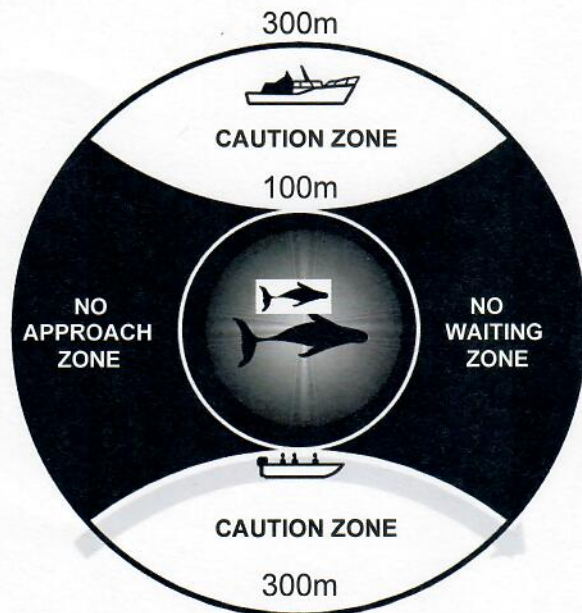


Figure 1: Approach distances for whales.

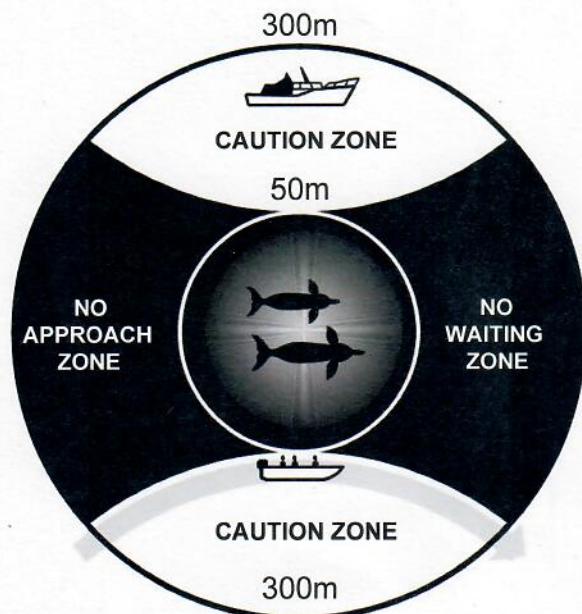


Figure 2: Approach distances for dolphins and dugongs.

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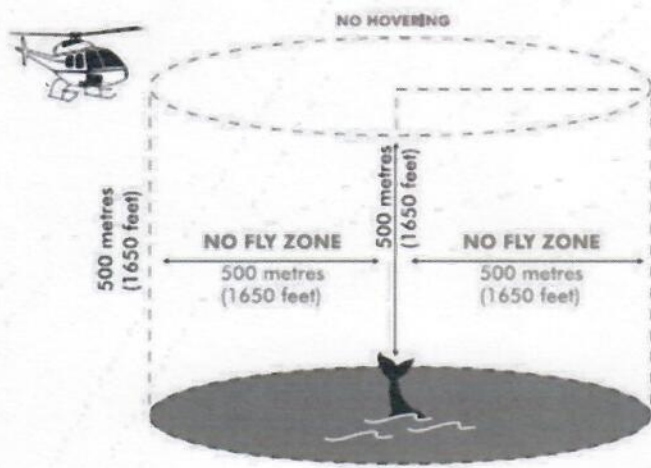


Figure 3: Approach distances for helicopters

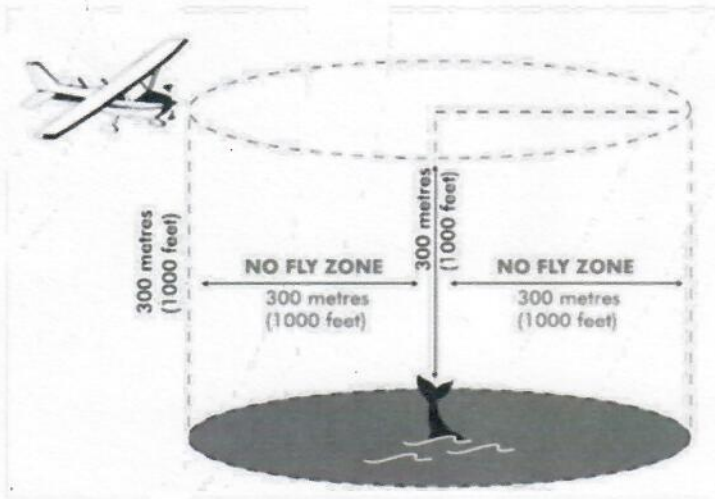


Figure 4: Approach distances for aircraft



No approach zone

- For a vessel, the no approach zone is 100m from an adult whale and 50m from an adult dolphin and dugong, including the area directly in front and behind a pod. When a calf is present, the no approach zone is 300m from a whale, dolphin or dugong.
- Prohibited vessels should not enter the caution zone.
- If a vessel accidentally approaches cetaceans closer than the recommended distance, it must move away from the no-approach zone at slow speed.
- Helicopters or large gyrocopters must not get closer (in height or distance) than 500 m to a whale, dolphin or dugong.
- Other planes must not get closer (in height or distance) than 300 m to a whale, dolphin or dugong.
- Drones for personal and scientific use must not get closer than 30m (in height or distance) unless under special permit for research or photography.

Approaches of mother and calf pairs

Pods of cetaceans and dugongs containing calves are particularly vulnerable to disturbance and require additional protection.

- Exercise extreme caution with pods containing calves.
- Restricted 'no watching' zones and specific restrictions on length of encounter and distance of approach should be considered for pods of species of conservation concern such as blue whales, sperm whales, baleen whales, dugongs, with calves.

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Swimming with Whales, Dolphins or Dugongs


Swimming with whales, dolphins or dugongs may place both people and animals at risk. Risks to humans may include injury and possible death from interactions with large, wild animals, especially pilot and false killer whales, both of which have been recorded pulling swimmers by the leg to depths. Risks to whales, dolphins and dugongs, may include physical damage from collisions with vessels and people and ecological impacts caused by changes in normal behaviour of the animals.

At present there is little scientific information available on the potential short and long-term impacts of swimming with whales, dolphins and dugongs. It is therefore recommended that Timor-Leste does not permit commercial *swim-with* whale operations until those conducting such operations receive training from government accepted trainers and commit to the standards and procedures set out in these guidelines under special permit.

All other *in-water* encounters (eg. For scientific research and commercial photography purposes) should only occur under special permit.

For special permit *in-water encounters* with whales, dolphins or dugongs it is recommended that the following standards be applied to these operations.

- Particularly sensitive animals (eg. mothers with calves, nursery or maternal pods) and critical habitats (eg. calving grounds and key feeding areas) should not be targeted for *in-water encounters*;
- Calves (including mother-calf pairs and nursery or maternal pods) of species of high conservation concern (eg. blue whales, sperm whales, baleen whales and dugongs) should not be targeted for *in water encounters*, particularly free-diving;
- Swimming with the use of any underwater breathing apparatus is not allowed. Rebreather or free diving only;
- Underwater flash photography or lighted filming is not allowed;
- Use of selfie sticks and GoPros is not allowed for sensitive animals and species of high conservation concern;
- All persons in the water with whales, dolphins or dugong should be accompanied by an appropriately trained local guide;
- Maximum 4 swimmers allowed in the water at any one time with a cetacean pod, a maximum of 3 swimmers for dugong;
- Maximum interaction time of 1 hour with a pod/population per day;
- 50m drop-off distance for boats facilitating swimmers and minimum swimmer distance from animals of 30m;
- Swimmers should not be allowed in the water with surface-active large whales;
- The use of tether lines, surface lines and surface floats should be considered to control/regulate free swimming and free diving with sensitive animals and species of high conservation concern;
- Placing the vessel in the line of travel of the pod is prohibited during *in water encounters* and the number of swimmer drop off's or attempts is limited to 3 in 1 hour.



Leap frogging

Leap frogging is the manoeuvre that consists of a vessel repeatedly 'overtaking' and placing a vessel in the path of a moving cetacean or pod in order to achieve a close approach to whales or dolphins. This kind of approach is known to be more disruptive for the animals.

No approach zone

The no approach zone is within 100m from a whale and 50m from a dolphin including the area directly in front of or behind a pod. Vessels should not enter the no approach zone and should not wait in front of the direction of travel of a pod.

Pod

A pod is an individual or a group of more than one cetacean.

Recreational vessel

A recreational vessel refers to any vessel observing whales and dolphins for leisure without implying any form of hire or reward by the transported persons.

Whale watching

Whale watching refers to viewing activities of any cetacean species, both whales and dolphins, from land, sea or air.

Wing-in-ground effect craft

A wing in ground effect craft is a boat with wings that cruises just above the water surface. It floats on a cushion of relatively high-pressure air created by aerodynamic interaction between the wings and the water surface.

Dili, June 08, 2020



Acaçio Guterres
Director General Fisheries



Glossary

Calves

Calves are young whales, dolphins or dugong, approximately half the size or less of adult individuals for their species. They usually travel in close proximity to their mother. Calves are particularly vulnerable as they rely on their mother's care and proximity for survival.

Caution zone

The caution zone is the area within 100 – 300m of a whale or 50 – 300m for a dolphin or dugong and within which all vessels should behave according to the guidelines and/or regulations in effect in order to minimize the impact on the animals being approached or watched.

Commercial operator

A commercial operation means an operation carried on for any form of hire or reward, in which persons are transported, conveyed, conducted, or guided where a purpose is to view or come into contact with cetaceans.

Cetaceans

Cetaceans include all species of whales, dolphins and porpoises.

Dedicated observer

A dedicated observer refers to any crewmember or passenger onboard a commercial or recreational whale-watching vessel available to keep a watch for cetaceans. The observer's role is to assist the skipper of the vessel in localizing the animals and keeping track of their movements and behaviours.

Dugong

Dugong (*Dugong dugong*) is a medium-sized marine mammal. It is one of four living species of the Order Sirenia, which also includes three species of manatees.

Herd

More than one dugong together is called a herd.

J-maneuvers

A J-maneuvre is a vessel manoeuvre which places a vessel directly in the path or in front of a moving animal or pod to achieve a close approach. This kind of approach is known to be highly disruptive for cetaceans.

Annex

Cetacean Species of Timor-Leste and Their Conservation Status

No.	Common name	Scientific name	IUCN status	Global Population
1	Dugong	<i>Dugong dugon</i>	VU	120,000
2	Pygmy blue whale	<i>Balaenoptera musculus brevicauda</i>)	EN	10,000 – 25,000
3	Fin whale	<i>Balaenoptera physalus</i>)	EN	100,000
4	Sei whale	<i>Balaenoptera borealis</i>)	EN	57,000
5	Bryde's whale	<i>Balaenoptera brydei</i>	DD	90,000 – 100,000
6	Sperm whale	<i>Physeter macrocephalus</i>	VU	200,000 – 2,000,000
7	Pygmy sperm whale	<i>Kogia breviceps</i>	DD	unknown
8	Dwarf sperm whale	<i>Kogia sima</i>	DD	unknown
9	Cuvier's beaked whale	<i>Ziphius cavirostris</i>	LC	unknown
10	Blainville's beaked whale	<i>Mesoplodon densirostris</i>	DD	unknown
11	Killer Whale	<i>Orcinus orca</i>	DD	100,000
12	Short-finned pilot whale	<i>Globicephala macrorhynchus</i>	DD	unknown
13	False killer whale	<i>Pseudorca crassidens</i>	DD	unknown
14	Pygmy killer whale	<i>Feresa attenuate</i>	DD	unknown
15	Melon-headed whale	<i>Peponocephala electra</i>	LC	unknown
16	Rough-toothed dolphin	<i>Steno bredanensis</i>	LC	150,000
17	Rissos's dolphin	<i>Grampus griseus</i>	LC	unknown
18	Pantropical spotted dolphin	<i>Stenella attenuata</i>	LC	3,000,000
19	Spinner dolphin	<i>Stenella longirostris</i>	DD	unknown
20	Dwarf Spinner dolphin	<i>Stenella longirostris roseiventris</i>	DD	unknown
21	Fraser's dolphin	<i>Lagenodelphis hosei</i>	LC	unknown
22	Long-beaked common dolphin	<i>Delphinus capensis</i>	DD	unknown
23	Striped dolphin	<i>Stenella coeruleoalba</i>	LC	2,000,000
24	Indo-Pacific bottlenose dolphin	<i>Tursiops aduncus</i>	DD	unknown
25	Common bottlenose dolphin	<i>Tursiops truncatus</i>	LC	unknown
26	Indo-Pacific humpback dolphin	<i>Sousa chinensis</i>	DD	unknown
	Total Species Recorded			

Table 1. Cetacean species recorded in the waters of Timor-Leste and their global population and IUCN status (EN = Endangered, VU = Vulnerable, DD = Data deficient, LC = Least Concern).