



WWF

RESPONSIBLE
MARINE TOURISM

ID

2015

*Best Environmental
Equitable Practices*

Observe and Interact with Sea Animals Series

OBSERVE AND INTERACT WITH SEA ANIMALS

Edition 1 | November 2015

Observe and Interact with Sea Animals

Best Environmental Equitable Practices

OBSERVE AND INTERACT WITH SEA ANIMALS

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GLOSSARY

● **TOURIST ATTRACTION** --- Any subject or object which has uniqueness, beauty and value consisting of natural biodiversity, culture and man-made product that is targeted and destined as tourist destination.

● **TOURISM** --- Every activity related to vacation and is multi-dimensional, it also has multi-disciplinary aspect that emerge as something that is needed by everyone and country. It delivers as interaction between tourist and local community, between the tourists, government, local government and businessmen.

● **RESPONSIBLE TOURISM** --- An alternative concept of tourism that aims to minimize negative impact of mass tourism development through protection of natural resources, location, social values and culture which strengthen the development of sustainable business. This responsible act is part of three main principles of sustainability; responsible for the natural preservation, responsible for the social and culture, and responsible for the sustainable business.

● **TRAVEL** --- Every tourism activity which supported with facilities and service provided by community, businessmen, government and local government.

● **TOUR** --- Travel activity done by someone or a group of people by visiting certain places in purpose of recreation, personal development, or learning from tourism attraction for temporary period.

● **MARINE TOURISM** --- Recreation activity or tourism done in the sea or at the beach.

● **TOURIST** --- Individual or groups who travels to enjoy time, nature and culture.



PREFACE



INDONESIA is one of the countries situated in the World Coral Triangle seascape – a home for 76 percent of world's coral species, six out of seven species of sea turtle and 2,228 species of reef fishes. Marine tourism in Coral Triangle area contributes USD 12 millions from tourism in Indonesia (Raja Ampat and Komodo) and Malaysia (Sipadan).

The growth of marine tourism does not only bring advantage in terms of economic development, but also has negative impact regarding environmental quality towards local community in the tourism sites. Therefore, a responsible practice for all tourism activity is very important. Through Responsible Marine Tourism Program, WWF-Indonesia provides Best Environmental Equitable Practices (BEEP) as the best guideline for environmental based and equality to implement responsible marine tourism practice. The content of this guideline comes from conservation aspect which support natural resource management in order to improve quality of human being and environment. The practices that are suggested in this document were selected systematically from literature study, field data collection and discussion with marine tourism practitioners and academicians.

Through BEEP, WWF-Indonesia invites larger audience to encourage the achievement of responsible marine tourism management in Indonesia and ensure the natural resources provided are being used wisely and sustainably for the future. Considering many informations on environmentally-friendly marine tourism and dynamic of tourism activity itself, this guideline can be developed in line knowledge and experience from environmentally-friendly tourism activity.

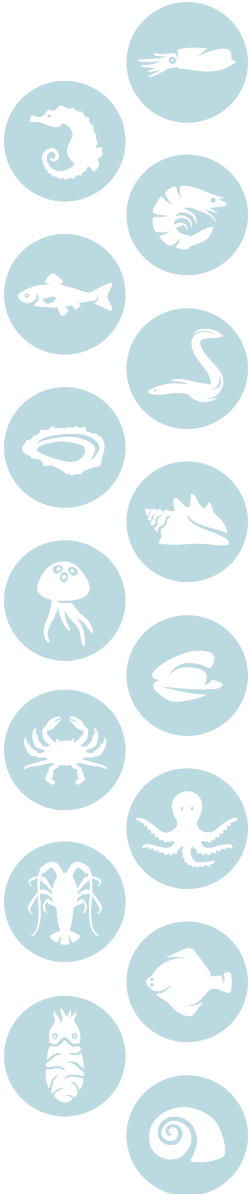
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GENERAL GUIDELINES



TRAVEL WITH RESPONSIBILITY

This series describes various negative impact brought by traveler and tour operator through any tourism activity. The given information begins with a brief explanation of developing issues related to impacts of observing and interacting with marine wildlife as well as operating vessel in the area of marine wildlife observation. The information will be followed with best practices that should be done to minimize the impacts of tourism activity towards environment, socio-cultural, and economic aspects.

Generally, responsible tourism aims to preserve resources, sites, protecting values and cultures of local community, and strengthen the sustainable business management. The “responsible” act is part of three main principles of sustainability, namely; responsible for environmental conservation, responsible for the social and culture, responsible for sustainable business management:

1. Responsible for environment

Principle which encourages tourism workers to reduce negative impact of tour activities at their best, and is followed by practice to improve the quality of environment through several ways such as; recycling waste, using renewable energy, controlling water usage, minimizing greenhouse gas emission, and protecting ecosystem in nature.

2. Responsible for socio-cultural aspect

Principle that aims to promote social and cultural values of local communities, and involve local people in managing tourism.

3. Responsible for sustainable business management

Principle which emphasizes the need of careful business management, not only provides benefits to the capitalist, but also to other businesses in the location of tourist destination sites. In this case is owned by local community.

WHY YOU SHOULD CARE



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HUMAN activities can disturb biological process of animals in natural habitat, and eventually can make their sustainability threatened. On the other side, human is the only species on earth that has common sense to actively help the other species. This means, human is expected to increase their awareness while watching and interacting with animals in their natural habitat in order to avoid any negative impacts.

Tour operators are expected to integrate environmental friendly practices in every marine tourism activity. They are also expected to be the caretaker and natural conservationist who are able to encourage adoption of the best practice while interacting with animals. Through this movement, both of tour operators and tourists are able to reduce the disturbance which could result in negative impact on the animals.

Below are some negative impacts that possibly occurred if animal watching activity in natural habitat is not well managed:

- Accident/ direct injury, for example crashed with a boat and being stepped on by the tourists;
- Change in species distribution, when the animals leave their important/core area of their livelihood. In some species such as sea turtle and marine mammals, this circumstance may occur because they are sensitive to excessive activity and interaction with human. Sea turtles can leave their foraging and nesting area, while marine mammals could leave their main area for breeding which eventually will reduce their population;
- If the animals interact more with human and boat, they are relatively more vulnerable to predators and disrupted in communicating with their group;
- Irresponsible tourism activity could give negative impact towards animal habitat, for example littering in nature can kill animals who live nearby. Some animals also live in vulnerable habitat such as coral reef ecosystem. Irresponsible activity such as less viable boat operating and minimum experience in swimming could easily damage the coral reefs;



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- Sea birds, sea turtles, and other animals could leave their foraging and breeding area and their nests if threatened by human activity. Mother of the animals could leave the babies and the males may become more aggressive on defending his territory;
- Marine mammals, such as whale and dolphin, usually spend their time in shallow and tropical water while nursing their calves. Doing an excessive dolphin or whale watching are also disturbing them and causes the mother become stressed then separated from the calves which could lowers their survivability;
- Marine animals are frequently found wounded or killed by boat's propellers or stepped by human. Any opened wound make them more vulnerable to infection and diseases.

While marine ecosystem is under serious threat, tourists and tour operators can have active role in protecting the ocean sustainability and be able to work on their tourism activities as well. By adopting this responsible marine tourism practice, tourists and tourism opeartors can reduce the negative impact of marine tourism activity relating to marine animals, their habitat and the landscape itself. At the end, this practice can encourage the sustainable use of natural resource and also improve business and positive reputation of tour operators.

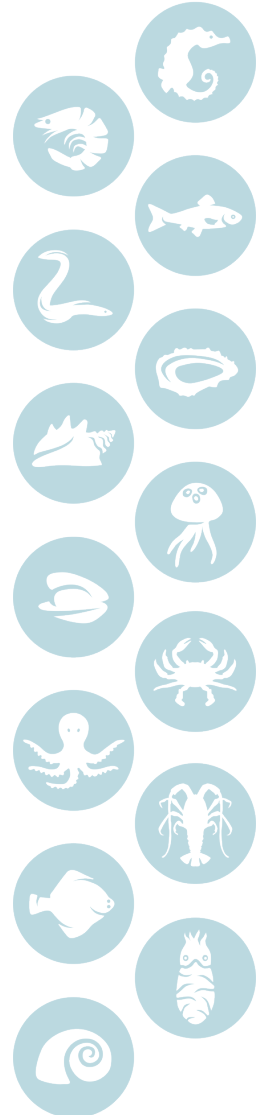


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UNDERSTANDING COMMON CHARACTERISTICS OF DISTURBED ANIMALS

UNDERSTANDING the common characteristics of disturbed animals would help tour operators to reduce negative impact of threatening activities. Here are some signs to help learning the disturbed animals.

Main characteristics	Dolphins	Dugong	Shark	Seabird	Whale-shark	Sea turtles	Manta Ray
Raising head	✓	✓	—	✓	—	✓	—
In silent or cautions	✓	✓	—	—	—	✓	—
Moving away from disturbance	✓	✓	✓	✓	—	✓	✓
The occurrence of sudden and irregular movements	✓	✓	✓	✓	✓	✓	✓
Suddenly forming group	✓	—	—	—	—	—	—
Slapping head/tail on the water	✓	—	—	—	✓	—	—
Change behaviour of diving	✓	✓	✓	—	✓	—	✓
Change of breathing pattern	✓	—	—	—	—	—	—
Change of group number	✓	—	—	—	—	—	—
Increasing vocalization	✓	—	—	—	—	—	—
Attacking tourist or other animals	✓	—	✓	—	—	—	—
The female suddenly protecting its children	✓	✓	—	—	—	—	—
Roll up its cephalic lobe	—	—	—	—	—	—	✓
Increase of swimming speed	✓	✓	✓	—	✓	✓	✓



OBSERVE AND INTERACT WITH SEA ANIMALS



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GENERAL KNOWLEDGE

Recently, there are various tourism activities beside visiting a beautiful destination. People are looking for new experiences, such as traveling to a place where they can directly interact with animals in their natural habitat. Tour operators are also expanding this kind of tourism activity because of growing enthusiasm and economic potential of this field.

This kind of tourism does not show any destructive activity, but on the other hand, it shows some negative impacts. It requires further responsible management in order to protect both of the tourists and animals. Besides, some coastal and marine animals are stated as protected, such as sea turtles, manta rays, some species of sharks, sea birds, and also marine mammals (dolphins, whales, and dugongs).

Impact of some irresponsible activities is called as disturbance caused by inappropriate operation of transportation unit and feeding activities done by the tourists. They also take pictures using camera flash excessively and touch the animals whether intentionally or not.



© WWF-Indonesia | Jan MANUPUTTY

One of sea turtle tracks on sand while nesting in some nesting beaches. This form of track can help to identify the species of sea turtles that has laid the eggs there.

Disturbance described as the result of direct and indirect interaction between human and animals that change their behavior or the environment. It has impact on animal safety and their livelihood in short, medium, and long term.

WHAT SHOULD BE DONE

It is important for tourists and tour operators to know the impact of tourism activity towards animals in their habitat. Here are some guidances that can be implemented to reduce the negative impact of wildlife tourism:



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It is prohibited to ride on or swim too close with sea animals while observing and interacting in order to make them feel undisturbed and unstressed.

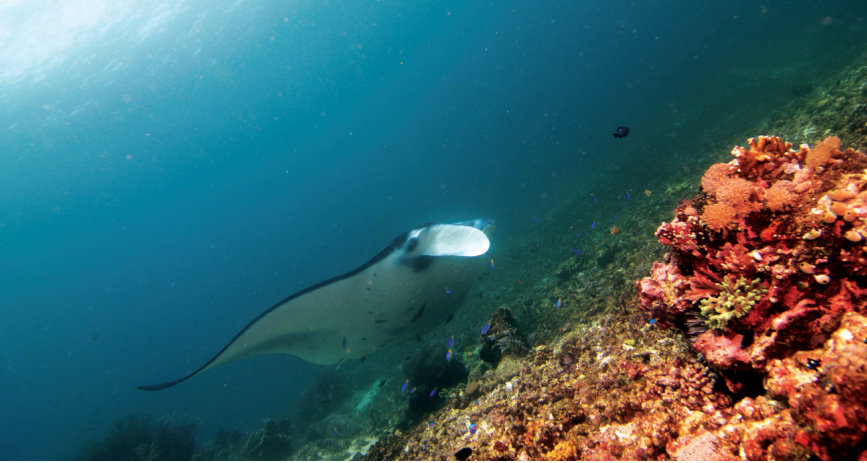
TOURISTS

- Choose tour operators who understand about sea animals that will be encountered. This can be known through complete information owned by the operator;
- Make sure you know and understand the applied local norms in the local area;
- Respect the local culture and local wisdom, such as way of dressing and prohibition to access some local area because of indigenous reason or local norms. Tourist can get this information from local tour operator;
- Make sure the tour operator has adequate First Aid Kit equipments;
- Watch carefully the site during marine activity to prevent unexpected situation such as being hit by boat or ship, or pulled by waves;
- Avoid approaching or disturbing animals that try to reach the surface, especially marine mammals;
- Do not chase or disturb animal activity, especially during sensitive state such as mating, foraging, or resting;
- Keep your distance from anxious or disturbed animals, or leave the area immediately;
- Let animals move and decide their emerging time to the surface freely;
- If any animals approach, do not approach back. If it is possible, stay away slowly and adjust distance according to animal Code of Conduct;
- Avoid physical contact with animals;
- Avoid feeding, chasing and catching, drawing attention, riding and blocking animal pathways;
- Some animals are sensitive to camera flash. If flash was needed, do not direct it to the eyes and to its head. Using flash is prohibited while interacting with whale shark;
- Do not litter;
- Do not take, buy, or trade animal and its derivative product.



A guide is explaining informations about sea animals that are potentially to be observed during the marine tourism activity.

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● SEA ANIMALS

- Tour guide should go underwater first before the swimmer/ diver;
- For snorkeling tourists, it is ideal to do the activity on the water surface and tourist guide should be attentive towards the tourists;
- Avoid snorkeling near the juvenile/baby animals;
- Do not disturb observed animals, like touching or provoking;
- Move very slowly and remain cautious in order to prevent body and diving equipments touching the coral reef and animals;
- For underwater photographer, always remember that safety comes first than taking photo and video. A diver need the skill of taking pictures and videos underwater. Unpractical underwater photography equipment affects buoyancy so the diver easily touch and destroy coral reef and animals while concentrating to get perfect picture;
- It is suggessted to not step on the bottom substrate – including sand – while snorkeling or diving. There are a lot of animal lives on or inside the sand, such as sea rabbit, sea cucumber, sea slug, ray and dan other animals. While diving, make sure that the diver is positioned 50 cm above substrate.



● SHARKS

- Diver should maintain minimum distance of 2 meters from animal's body and 3 meters from animal's tail;
- It is suggested to swim in small group, 5 people including tour guide would be ideal;
- Avoid sudden movement. While observing predator shark, sudden movement identified as disturbance;
- Be aware of surroundings, make sure the sharks know you see them;
- Avoid doing observation and interaction and any activities with sharks in low visibility such as dawn and twilight;
- Use protector adequately. Scientists suggest to use cloth and diving attribute in black or dark color, including hood, gloves and fins. Brightly colored equipment such as yellow and white are known to attract sharks.



● MANTA RAYS

- Be careful while going underwater in manta ray observation area in order to keep the rays feel unafraid or staying near from their feeding station or cleaning station;
- Keep 3 meters distance from manta rays. While diving in group, make a half circle formation to maintain available swimming area for manta;
- Do not touch or disturb manta rays. Divers are only allowed to watch and observe, because they are sensitive and touching them can remove their protective layer of their skin (mucus);
- If manta rays are approaching, divers are suggested not to make sudden moves;
- Maintain position and buoyancy on bottom of the seafloor, because manta rays need a space to move freely;
- Do not chase manta rays while they are swimming away. Divers are suggested to remain in their position. If manta rays feel comfortable, they will come back to that location. The swimming speed of manta rays can reach twice of the boat or around 14 knot;
- Be careful on releasing bubble while being under the manta rays, because it may shocked them and make them swim away;
- Using camera flash excessively will disturb manta ray, especially when they are eating or mating.

● SEA TURTLE

- Do not disturb nesting site of seaturtles;
- Do not left objects that can hinder sea turtles to emerge to the beach and lay their eggs;
- While watching sea turtles laying their eggs, do not make any disturbing sound. Only use low light lamp and use it as needed;



Observation process of turtle that arrives at the beach to lay its eggs, should be done from behind to prevent blocking its path back to the sea.

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- Do not point the flashlight directly to sea turtles' head. They are very sensitive of sound and light. They will not lay their eggs and return to the ocean if feeling disturbed;

The process of laying eggs of sea turtles consist of several phase, starting from the mother reaching surface, laying eggs, and covering nest. There are several steps when mother sea turtle becomes sensitive and if it feels disturbed, it will cancel the whole nesting process.

The disturbance can come from light or fire at the cigarette.

- Stay away while sea turtles cover the nesting hole (egg chamber);
- Do not hinder sea turtles that will arise to the land or going back to the ocean;
- Avoid physical or direct contact with sea turtle or eggs. Physical contact is only allowed for research activities such as body length measurement and tag installation;
- Be proactive in protecting sea turtles' nesting area from waste and other defect. Sea turtles will go back to where they hatched and will not come back if the place is already damaged.



Sea turtles cannot be disturbed while laying eggs. Taking photos is only allowed from behind its back or head with low light while sea turtles is laying eggs.

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● SEA TURTLE HATCHLINGS

- Do not point flashlight or intensive light to sea turtle hatchlings, even though they are already in the ocean;
- Do not disturb sea turtle nest or help them while emerging on the sand surface;
- Do not bring pets – especially dogs – because they could eat sea turtles' eggs and disturb them;
- Camera flash is only allowed to use when they have already emerged from their nest;
- Do not touch or hold sea turtle hatchlings;
- Let the hatchlings crawl to the ocean without being disturbed and helped;
- Stay on your position while sea turtle hatchlings crossing the beach, to minimize the risk of stepping on them.



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Newly hatched sea turtle cannot be disturbed while going to the sea.

RELEASING SEA TURTLE HATCHLING TO THE WILD AS TOURISM ATTRACTION

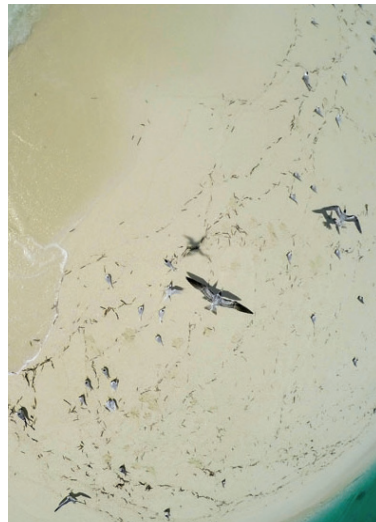
The most important aspect of this activity is that the tour provider should have legal permission, based on Code of Conduct; Government Regulation (Peraturan Pemerintah No. 8/ of 1999 and Peraturan Pemerintah No. 60/ 2007) and Veterinary Public Health (Kesmavet). Below are following procedures before releasing baby sea turtles:

1. Tourists should know that every releasing activity should have permission;
2. Tour operator should explain about releasing procedure, biological and conservation of sea turtles before activities are started;

3. Baby sea turtles should be released shortly after they are hatched, because they still have energy storing system formed as egg yolk inside their bodies. This energy will be used for swimming frenzy condition to avoid ocean predators. This stored energy within sea turtles' egg yolk can last for ten days without consuming any food. It helps sea turtle hatchlings to survive and adapt until they find new food source;
4. The right time for wild-releasing is after sunset to before sunrise, in order to avoid predator occurrence;
5. The releasing distance (from beach to the ocean) should be considered equal to the distance from the nest to the ocean in natural condition;
6. The newly hatched sea turtles should not be helped to reach the ocean. Rise and put them in the sea shore is strongly prohibited. If there is any weak baby sea turtles, then it should be rehabilitated for 1-2 days by the authorities;
7. It is prohibited to use flashlight or other light sources while wild-releasing. After the activity is finished, a brief examination using flashlight is needed to ensure every sea turtles have successfully swimmied in the ocean;
8. It is prohibited to use camera flash.

● SEA BIRDS

- Use binoculars or telescope;
- Keep 200 meters distance from sea birds nest;
- Undersand the situation and birds behavior;
- Bird watching will have a better view from upper deck. If the activity is done near from the animals, tourists are suggested to camouflage to their surrounding area;
- Do not approach and step on bird nest;
- Avoid approaching bird nest, especially to avoid stepping on bird nest;
- Before leaving survey area, tourists are suggested to check logistics or personal belongings in order to prevent things left behind and attracts wild animals.



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TOUR OPERATORS

Basically, there are some points that should be considered related to marine tourism activities, such as observing and interacting with wild animals in their habitat.

- Do the animals show disturbed signs?
- How big is the size and capacity of the boat?
- Is there any other boat near the location? If there is any, how many of it?
- Are the animals observed a mother and a baby?
- Is there any boat in observation path way?

To help understanding those following things, here are some detailed explanation to observe and interact with wild animals in their natural habitat:

- Understand tourism location that has been chosen, especially if it is a conservation area;
- Appreciate local rules of animals preservation in the location;
- It is suggested to make a documentation while encountering the animals. The result will help tourism operators to have actual data about the observed animals. The form of documentation may take form as photo or video with date and following information, such as:



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- Name of tour operators ;
 - Number of tourists;
 - Period of activity;
 - Encounter spot (using GPS coordinate or natural signs);
 - Behavior and activity done by the animals;
 - Type of species and its activity during the encounter;
 - Condition of surrounding while observing animals (polluted, destructed, etc.)
- It is suggested to properly save the documentation of observation and interaction;



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- Tourism operators may also make brochure/poster which pictures the authenticity of animals in tourist locations and also give guidance in observing and interacting with sea animals. This step aims to educate and improve tourist awareness;
- Report to the local government about environmental destruction or disruption that is found in tourism location;
- Make sure there are sufficient boat crews who monitor species appearance on the water surface;
- Remind the tourists to always preserve environment and stay aware of potential hazard while observing and interacting with animals;
- While swimming or diving with animals, the boat usually tends to approach as well, which increase the chance to disturb the animals (crashed by the boat, propellers, or anchor);
- Make sure your staff understand ecological characteristic of each dive sites, in order to educate client to reduce the impact of dive activities towards dive locations;
- Before going to sighting area area, tour operator are obligated to share these informations to the tourists:



- Do not create loud noises that will attract animals' attention while observing, such as hitting the hull, screaming, or whistling loudly;
- Do not feed animals, because:
 - They may look tame, but actually have hazard potential and can be aggressive if approached;
 - Prevent any dependency to human;
 - The given food would probably not be suitable to animals' digestive system;
 - Animals would approach food source. This would increase the chance for animals being hit by boat or propellers;
 - There is a possibility of disease transmission between man and animals.
- Do not litter;
- Tourists have an important role to keep the boat away from the animals;
- Disseminate the applied code of conduct.

Swimming together with whales, dolphins, and dugongs are NOT suggested because it will disturb the animals.

- It is suggested to observe and interact with whales and dolphins only from the boat, because some time both of the mammals could attack approaching human;
- Dive operator could divide the tourist into two groups, consist of highly experienced group and less experienced group of diver;
- Do not dive or swim with animals for more than 60 minutes per activity or 120 minutes each day;
- Do not surround animals to avoid them from stress. This concept should be applied while observing in the water. Coordinate with other tour operators to organize better observation activity;
- Organize training for the boat crew/staff regarding environment, marine, and fisheries issues;
- Tour operators should have worst scenario for any unexpected thing happened during the observation and interaction activity with sea animals. The scenario includes first aid, emergency contact with tourists, and knowing the nearest health facility;
- Make sure communication facility is adequate and well functioned.



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INSTRUCTIONS FOR OPERATING BOAT WHILE WATCHING AND INTERACTING WITH ANIMALS



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While observing marine mammals, keep the boat speed up to 7 knot for dolphins safety; or the safe speed that makes no waves for whales.

MARINE MAMMALS

● WHILE APPROACHING ANIMALS:

- Slowly lower the boat's speed and maintain on 7 km/h or in no wake speed;
- Maintain the boat's speed not to exceed the speed of slowest animal in their pod;
- Avoid caution zone while watching calfs (both of dolphin and whale).

● WHILE OBSERVING ANIMALS:

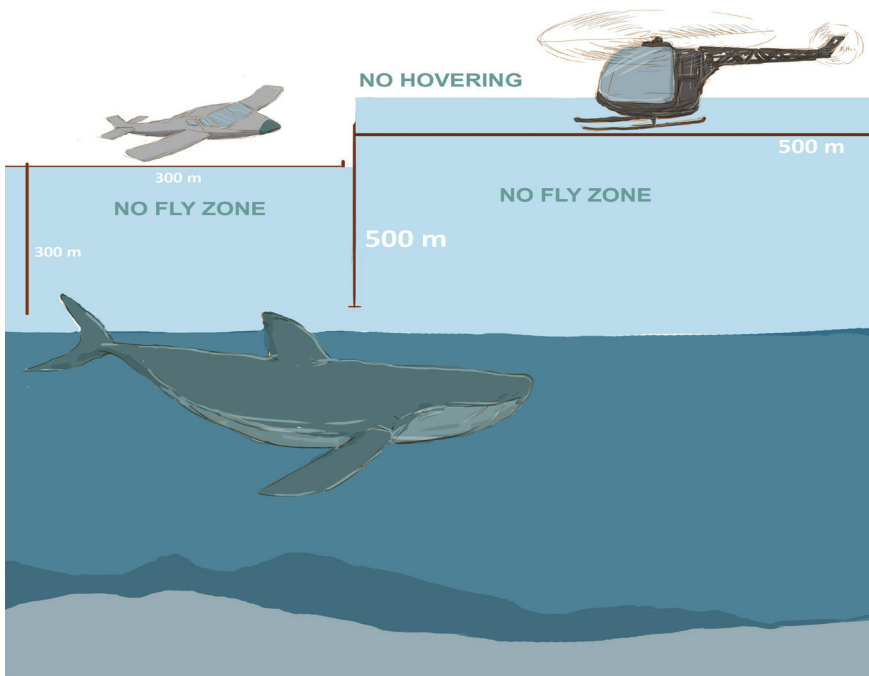
- For animal watching, use binoculars, telescope, or zoom lenses;
- Avoid making loud noise. Marine mammals are sensitive to sound. It is recommended to watch them less than 20 minutes to keep them off from stress;



- Always make sure boat position is inline with animals, a bit behind the animals but not trailing them;
- Do not hinder animals path way, especially for parent and children. This is to avoid separation between them;
- When turned off boat machine, do it slowly in quiet condition in order not to make the animals shocked for the disappearance of engine sound;
- Do not operate the boat into observation area, if there is already 3 boats in medium size (capacity of 15-20 person) or 10 *jukung/sampan* (a term for smaller boat with capacity of 4-5 person). It is suggested to have a good coordination is suggested among boat crews;

Illustration 1:

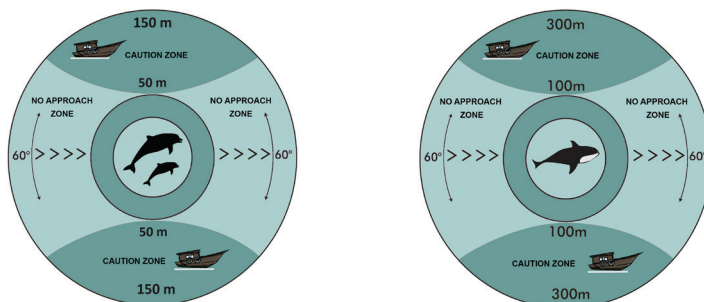
Result of re-drawn from Department of Environment and Heritage (2005)



Operating plane and helicopter at whale observation area.

Illustration 2:

Result of re-drawn from Department of Environment and Heritage (2005)



Boat operation in whale and dolphin observation area

- Limit the observation time and interaction with animals:
 - More than 1 boat: 15 minutes
 - One boat: 30 minutes
 - If animals show disturbed behavior, leave the observation area immediately.
 - Do not enter caution zone if you watch any animals is entangled in fishing nets, lost in water area, or stressed. Report to government or authorized officials in local area
 - For boat that comes last, it is suggested to wait in outer part of observation area or to look for animal group in another area

● WHILE LEAVING ANIMALS:

Change boat direction while maintaining constant speed at 7 km/hour until nearest distance of 300 m from animals. Treat engine and boat propellers – if possible use protection for propellers to avoid noise from boat machine.

CAUTION ZONE:

100-300 m distance from whale; 50-150 m from dolphins; and 40-100 m from dugong.

NO APPROACH ZONE:

0-100 m distance from whale; 0-50 m from dolphins; and 0-40 m from dugong.



SHARKS AND MANTA RAYS

- Before going in for diving or snorkeling, give direction according to observation and interaction of marine animals Code of Conduct, including entry and exit procedure from water, safe distance interacting with animals, condition of diving or snorkeling location. Dive guides have to accompany the diver or snorkeler for safety aspect;
- If there is a current, people from the boat should drop off divers in upstream area and pick them up near the downstream area from where animals are gathered;
- The amount of boats and tourists should be limited. It is suggested that there are no more than nine boats in one location of animals assembly point;
- When manta rays are seen near the water surface, boat speed should be lowered and maintain its safe distance between 8 knot (100 m) and 5 knot (30 m);
- Interacting with manta rays who are cleaning their body should be done with SCUBA diving. Meanwhile, interacting with manta rays are better done with snorkeling, unless they are found cleaning in shallow area (less than 3 m).

SEA BIRDS

Maximum distance of boat and animals is 50 m.

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Ayu Ginanjar Syukur finished her undergraduate study in 2014, majoring in Aquatic Product Technology in Bogor Agricultural University. Ayu has begun her interest in conservation world since she joined Fisheries Diving Club (FDC-IPB), when she participated in various coral reefs monitoring activities especially reef fish. In the same year, Ayu started her internship and research about manta rays in Komodo Islands with MantaWatch. In 2015, Ayu joined WWF-Indonesia as Responsible Marine Tourism Assistant who is responsible for supporting and implementing the finalization, dissemination, promotion, and assistance to staffs of tourism sector programs in Responsible Marine Tourism Program WWF Indonesia work area. In the beginning of 2017, Ayu plays a new role as Marine Ecotourism Improvement Program Officer.



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Ida Ayu Dian is a vet graduated from Udayana University who had finished her 5 years study. Dian has been participating in conservation activities since 2011. In 2012 Dian conducted her research in management of sea turtles in captivity. Until the end of her study, Dian became a medical and education assistant in Turtle Conservation and Education Center Serangan. In 2015, Dian has joined as a Responsible Marine Tourism Assistant for Species Issue who is responsible for promoting responsible marine activity, as well as supporting all of species protection programs in SBS area.



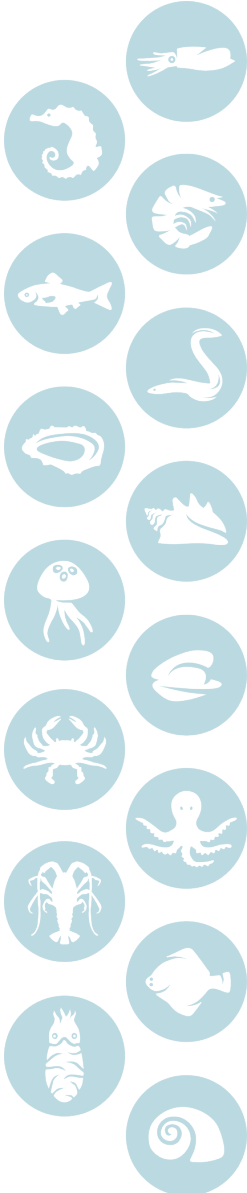
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Imam Musthofa finished his undergraduate study at Fisheries Management Major, University of Indonesia. Imam joined WWF-Indonesia Marine Program in 2002. In 2007, Imam took responsibility as the Fisheries Coordinator, WWF-Indonesia – and later was promoted as Sunda Banda Seascape and Fisheries Program Leader WWF-Indonesia in 2013. Imam is now in charge of managing fisheries program and ensuring their achievement quality in Sunda Banda Seascape work area.





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