

GUIDELINES FOR THE EUTHANASIA OF LIVE STRANDED CETACEANS

1. GENERAL PRECAUTIONS

Definition of euthanasia: *the use of humane techniques to induce the most rapid and painless and distress-free death possible (AVMA 2013).*

From an animal welfare point the pain and suffering of live stranded cetaceans could be ended by euthanasia, and should be considered. These guidelines pertain to such events.

ALWAYS call the responsible authority. Specify telephone number!! Parties: Identify relevant responsible authority for animal welfare issues related to marine mammals.

- *Do not act before responsible authorities have been notified, and necessary permission granted*
- *Only authorised personnel should perform euthanasia*
- *Human safety is the 1st priority. A whale may move the tail or pectoral fins with great force*
- *Action (euthanasia, disentanglement or moving of animals) should not be initiated in a hasty manner due to expectations from the public*
- *The police must always be notified if weapons are used*

A stranded whale is defined as a whale that is laying on land or in shallow water. The general rule is that such animals should be euthanized and no rescue operation should be conducted.

When a large whale, such as members of the rorqual family (fin whale, minke whale and humpback whale), sperm whale, killer whale or a beaked whale is stranded on the beach or in shallow water it is assumed that they are already sick or weakened for some reason. Due to its weight, attempts to pull the animal out to sea will inflict wounds and injuries. For animal welfare reasons, **the animal should not be pulled out to sea**. It should either be allowed to die on its own, or euthanized if it could be done in a responsible manner from an animal welfare perspective.

Responsible euthanasia require knowledge of the anatomy of the species and which weapons are the most effective. Euthanasia is only responsible when conducted by competent personnel and with suitable weapons.

2. KILLING METHODS

Stranded whales or whales that are entangled beyond rescue can be killed by explosive grenades, explosives, heavy calibre rifles and drugs. However, methods for the euthanasia of large whales by drugs are not sufficiently developed, and should not be used.

2.1 EXPLOSIVES

Explosive harpoon grenade/penthrite grenade can be used only on large whales (all baleen whales plus killer whale, beaked whale and sperm whale) out at sea or in shallow waters where it is possible to approach the animal with a vessel with harpoon gun (shooting distance within 10 – 30 meters). **The shoot shall be aimed towards the thorax from the side** as shown in figures 1, 2, 3 and 4. When used correctly the animal will in most instances die immediately.

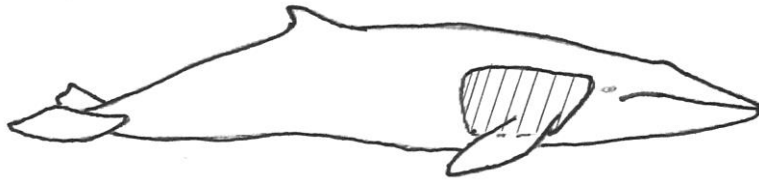


Fig. 1 Minke whale target area (vital organ area – hatched area) for detonation of harpoon grenade



Fig. 2 Fin whale target area (hatched area) for detonation of harpoon grenade



Fig. 3 Humpback whale target area (hatched area) for detonation of harpoon grenade

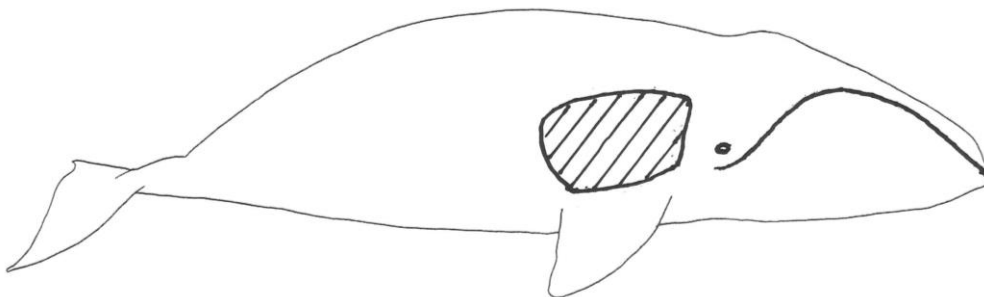


Fig. 4 Bowhead whale target area (hatched area)

2.2 RIFLE

Rifles may be used to kill several whale species. For smaller toothed whales, such as pilot whales and dolphins, ordinary expanding large game ammunition can be used. For large whales, however, the expanding projectile will most often not be able to penetrate the thick skull and reach the brain. Therefore, expanding ammunition should not be used on large whales.

The recommended ammunition for large whales is full metal jacket, round-nose bullets in calibre 9.3 and upwards. Norwegian investigations have shown that such ammunition penetrates the skull and reach the brain causing instantaneous loss of consciousness and death in minke whales. Calibre .458 has proven good results in both humpback- and sperm whales.

Aiming/targeting and safety

- Main rule: aim at the brain or first cervical vertebra
- For animals lying on the side: aim towards the brain from the back side (dorsal side) of the animal

- For animals lying on the belly/with stomach down: position yourself to aim from above towards the brain
- The barrel of the rifle must never be in contact with the animal when the shot is fired! If in contact, the rifle may explode, which may be life threatening for the shooter.
- Be aware of the background – the bullet may penetrate the skull and ricocheting represents danger for shooter and personnel.

2.2.1 Baleen whales (minke whale and other fin whale species (*Balaenoptera*) and humpback whale)

Ammunition:

- Minke whale: full metal jacket, round-nosed bullets calibre 9,3 and larger
- Other fin whale species and humpback whale: full metal jacket, round nose bullets calibre .458 and larger

For the largest whales, it may be necessary to use several shots to make sure the animal is dead.

To hit the brain in these species, the shot should be placed in the middle plane (sigital plane) along an imaginary projected line that starts at the eye and advances upwards and backwards at the same angle as an imaginary line from front through blowhole and eye (Figure 1).

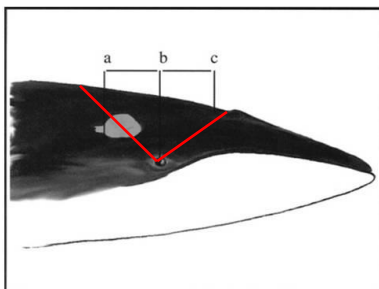


Figure 1
Minke whale head with the brain as seen from the side

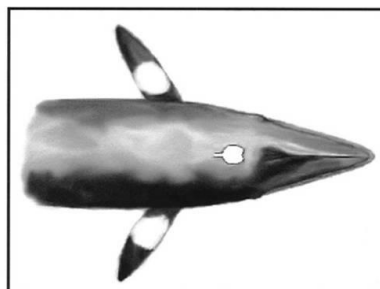


Figure 2
Minke whale head with the brain as seen from above

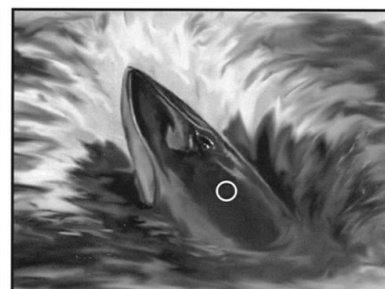


Figure 3
Minke whale head with the characteristic target point for the rifle seen obliquely from the back

Fig. 30. The brain's location in the minke whale and target sites for gunshot from different positions. (SK Knudsen, H Rud and EO Øen, 1997)

Seen from the side, the brain is positioned in a plane mid-way between the eye and dorsal surface of the head. Fig. 1 shows the back edge of the brain laying along a projection on a horizontal line (a) as far behind the eye (b) as the blowhole (c) extends to the front of the eye. The brain of the minke whale is about 20 cm wide, 20 cm long and 15 cm high. The centre of the brain lays about 55 cm behind the blowhole opening in a small (5.5 m) minke whale and about 75 cm behind the blowhole opening in a large (8.5 m) minke whale.

Shot from the back side (dorsal side)

Aim from above directly towards the brain. If the shot is directed from behind, it must be directed obliquely forwards approximately 60 – 80 cm behind the blow hole.

Shot from the side

Aim at a point on the imaginary line that goes backwards from the eye and about 20 - 25 cm below the contour of the head.

Shot from the belly side (ventral side)

Aim midway between the jaw bones (mandibles) to a point 30 - 50 cm (depending on the size of the whale) behind the eyes. It may be difficult to accurately place the shot.

Shot to the heart

If emergency situations, the shot may be aimed to the heart.

Fin whale species: the heart is located underneath the centre of the pectoral fin when the fin is lying into the body.

Humpback whale: the heart is located underneath the front half of the pectoral fin. See figures 1 - 4

Bowhead?

Animal reaction to shot in brain and heart

Hits in the brain or cervical vertebrae: often the whale will strike one or more times with the tail fluke before the body it is completely relaxed. If the effect is uncertain, the animal should be reshot. When reshooting, the shot may be placed 10 – 15 cm in front of or behind the first shot.

Hits to the heart: Usually, the animal will show little reaction to the shot. Unconsciousness and death are caused by the bleedings that occur, and are therefore not immediate but will take some time.

2.2.2 Sperm whale

Use harpoon grenade or rifle of minimum calibre .458 and round-nosed or flat nosed full metal jacket bullet.

The brain is located along an imaginary projected vertical line midway between the eye and anterior contour of the pectoral fin. From the back side (dorsal side) and the ventral side, the shot is directed in the middle plane (sagittal plane) along this imaginary line.

Because of the spermaceti organ in the head, the sperm whale should preferably be shot from the side. The shot is directed at the point of the skull where the vertical line crosses an imaginary horizontal line from the eye. Fig. 5.

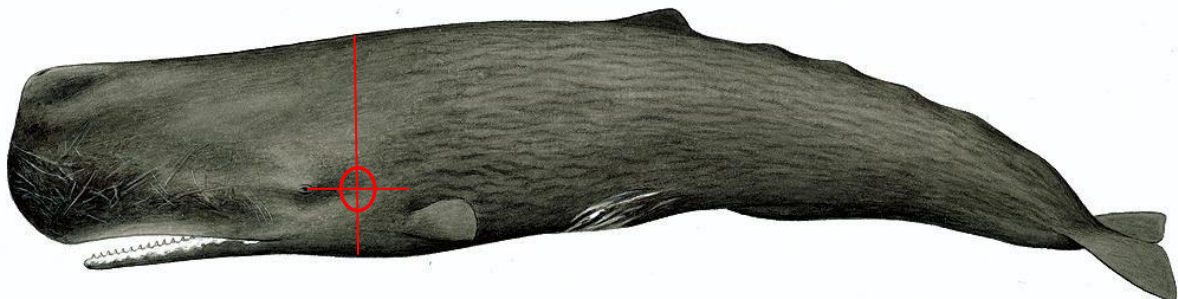


Fig. 5. Sperm whale: location of the brain and rifle shooting instructions from different positions. Illustration: Marcos Oliveira, Nat Drawings, http://natdrawings.blogspot.no/2013_04_01_archive.html Shooting instructions: EO Øen

2.2.3 Killer whale

The brain is located approximately right underneath the white spot above the eye. Shot from the side should be directed in the centre of the white spot. Shot from above should be directed in the midline so that it passes through this area – see fig 6.

Use rifles with a minimum calibre of 9.3 mm and a full metal jacket round-nosed bullet (equivalent to ammunition for minke whales).



Fig. 6. Killer whale: location of the brain and rifle shooting instructions from different positions. Illustration: www.regjeringen.no/no/dokument/dep/nfd/veiledninger_brosjyrer/2000/fakta-om-hval-inorske-farvann/4/id275084 Shooting instructions: EO Øen

2.2.4 Other toothed whales

Ammunition:

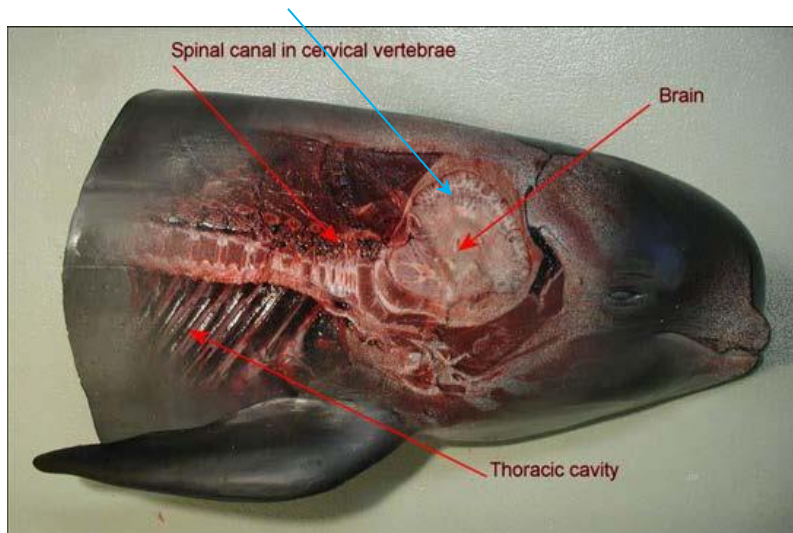
- Pilot whales and dolphins: expanding bullets (hunting ammunition) may be used in calibres e.g. .270, .308, .30.06 or equivalent calibres
In dolphins and harbour porpoise, shotguns with slugs, i.e. lead bullets, may also be used.

In dolphin species the shot should be directed from the blowhole towards an imaginary line through the anterior contour of the pectoral fins (approximately 45 °) – see fig 7.



Fig. 7. Dolphins: rifle shooting instructions. Shooting instructions: EO Øen
Illustration: *Lagenorhynchus albirostris* © Würtz-Artescienza, CMS nettsider;
http://www.cms.int/reports/small_cetaceans/data/l_albirostris/l_albirostris.htm

In pilot whales, the shot should be directed in the same angle, approximately 15 – 20 cm behind the blowhole - see figure 8.



*Fig. 8 Location of the brain and correct aiming of the rifle shoot (blue arrow). Shooting instructions: EO Øen
Illustration: B.Hanusson, J. Olsen*