

RELEASING MARINE TURTLES CAUGHT IN FISHING NETS AND OTHER DEBRIS

GUIDANCE FOR ESTABLISHING A PROTOCOL FOR USING SMALL BOATS LAUNCHED FROM OFFSHORE GEOPHYSICAL PLATFORMS



February 2009



www.ketosecology.co.uk

This document should be cited as:

Ketos Ecology (2009). Releasing marine turtles caught in fishing nets and other debris: Guidance for establishing a protocol for using small boats launched from offshore geophysical platforms. 9 pp.

It is available for download at:

www.ketosecology.co.uk/Turtle_Rescues.htm

1. INTRODUCTION

Seven species of marine turtle occur worldwide, five of which are found throughout tropical and subtropical waters while a further two species have more restricted geographical ranges (Table 1). The IUCN classifies three of these species as Critically Endangered, a further three as Endangered and a single species as Data Deficient. All marine turtle species are therefore of high conservation concern.

Table 1. Status of marine turtles worldwide (IUCN = International Union for Conservation of Nature and Natural Resources)

English name	Scientific name	Distribution	IUCN status
Leatherback turtle	<i>Dermochelys coriacea</i>	Worldwide in tropical/subtropical/temperate waters	Critically endangered
Loggerhead turtle	<i>Caretta caretta</i>	Worldwide in tropical/subtropical waters	Endangered
Green turtle	<i>Chelonia mydas</i>	Worldwide in tropical/subtropical waters	Endangered
Hawksbill turtle	<i>Eretmochelys imbricata</i>	Worldwide in tropical/subtropical waters	Critically endangered
Flatback turtle	<i>Natator depressus</i>	Northern Australia and southern Papua New Guinea	Data deficient
Olive ridley turtle	<i>Lepidochelys olivacea</i>	Worldwide in tropical/subtropical waters	Endangered
Kemp's ridley turtle	<i>Lepidochelys kempii</i>	Primarily Gulf of Mexico (and warm Atlantic Ocean)	Critically endangered

One of the primary anthropogenic threats impacting turtle populations are high levels of accidental capture in fishing nets, trawls and on long-lines throughout the world's oceans. There are guidelines in place in some geographic regions to encourage fishermen to release live turtles found caught in fishing gear, describing how to bring marine turtles onto boats, release them from netting and remove hooks from their mouths (see Further Information).

However, there are also large amounts of discarded fishing gear (or 'ghost nets') floating in the world's oceans (e.g. from accidental loss, storm damage, equipment failure, deliberate cutting of nets and long-lines, and dumping at sea) and these also trap turtles. Net that has been left in the water for prolonged periods may harbour a variety of marine life including algae, invertebrates, barnacles and fish, attracting turtles to them to forage where they can easily become accidentally entangled. Months or even years after being lost or discarded at sea, these nets continue to catch, injure and often kill marine wildlife. It is not uncommon to observe several turtles caught in a single small piece of discarded netting. Turtles caught in discarded fishing gear are restricted in movement and unable to dive or feed, suffering starvation, laceration and infection, and eventually suffocation (turtles need to return to the surface to breathe).



Two olive ridley turtles caught in discarded fishing net off Equatorial Guinea

This protocol was produced following frequent observations of marine turtles caught in fishing nets and plastic debris during seismic surveys in West African waters. In recent years with increased environmental awareness onboard seismic survey vessels, such incidents have sometimes resulted in the launching of small boats to attempt to cut turtles free from nets.

Such actions have several obvious benefits, including:

- Conserving endangered species
- Raising environmental awareness and credibility within the offshore geophysical industry
- Removing discarded fishing net from the environment (seismic vessels themselves cut fishing gear and discard it into the environment, and therefore have an obligation to do what they can to counteract this problem), both preventing further marine fauna fatalities and reducing the risk of entanglement with seismic equipment
- Opportunities for small boat training, improving future MOB responses
- Raising crew morale via 'feel good factor'

However, small boat launches to release trapped turtles are not without risk, and it is important to establish protocols to enable these operations to be carried out safely.

While this guidance document has been written primarily for use on seismic survey vessels, the procedures contained here could be adapted and equally applied to any vessel (e.g. standby vessels, chase boats) or platform (e.g. FPSOs, drilling rigs) operating offshore in warm/tropical waters where turtles occur.

There are three main steps to establishing a turtle release protocol on a seismic survey vessel or other platform:

1. Seeking approval for the operation from all relevant parties (including the Captain, Party Chief and Client) and completing the necessary HSE paperwork
2. Agreeing on a small boat (fast rescue craft (FRC) or workboat) launch procedure in the event that a trapped turtle is observed
3. Establishing a safe turtle handling protocol for use during the release

These will be described below.

2. APPROVAL AND HSE DOCUMENTATION

The launching of small boats from offshore platforms is potentially hazardous and the necessary approvals must be sought to launch a boat specifically to rescue marine fauna. It should be emphasised throughout that obtaining approval for a turtle release operation is not equivalent to making the operation mandatory. In all cases, turtle release operations are subject to weather and operational conditions at the time. However, seeking an approval 'in theory' might include the following stages:

- Discussions between Client and Contractor prior to job mobilisation (at the contract stage)
- Discussions held at the job start-up meeting
- Onboard discussions between key personnel (including Captain, Party Chief, Client Rep, HSE Rep, Coxswains, Biologists)

Assuming that an approval 'in theory' is forthcoming, there will be relevant HSE considerations prior to the operation being more formally approved. These should include:

- Completion of a Job Safety Analysis (JSA) (or other relevant risk analysis) by key personnel which should be approved by the Client HSE department. An existing JSA relating to small boat work can be adapted as necessary
- Compilation of a list of appropriately skilled small boat crew, all of whom should be briefed on the small boat launch procedure and turtle handling procedures
- All personnel going on a turtle release operation should have received training in knife handling and be aware of, and familiar with, the necessary personal protective equipment (PPE) for small boat operations

Once the necessary HSE guidance is in place, the turtle release operation should be approved (subject to weather and operational conditions) by the onboard management (Captain and Party Chief) and the Client.

3. ESTABLISHING A SMALL BOAT LAUNCH PROCEDURE

A protocol should be established for assembling crew and equipment, for getting permission to launch, and the actual launching of a small boat in the event that a turtle is seen. The choice of small boat for releasing a turtle from fishing net would preferably be a FRC rather than a workboat, since an FRC is closer to water level

making it easier to both carry out at at-sea release and to bring a turtle onboard the boat if necessary.

An existing protocol for FRC/workboat launches can be amended to relate to turtle releases. It needs to be determined:

- Who gives permission for an FRC launch (usually the Captain)
- Who will comprise the crew (usually the MOB crew)
- Who needs to be notified prior to launch (for example the Party Chief and Client)
- What equipment might be needed
- Where the toolbox will take place

An example launch protocol for a seismic ship might run as follows:

- Turtle in fishing net is spotted and reported to the bridge officer on watch (OOW) who notes the GPS position
- OOW determines whether weather conditions are suitable for a small boat launch
- If yes, OOW calls the Captain to ask permission to launch the FRC
- If permission is granted, the OOW calls the coxswain and asks the deck crew to prepare the FRC while crew are assembling
- OOW calls the Instrument Room to request members of the seismic team as FRC crew
- Party Chief and Client Reps are notified by the OOW
- All FRC crew meet with the Party Chief and Client at the FRC muster station, don the necessary PPE, collect necessary equipment and have a pre-launch toolbox meeting

The success of a turtle release operation depends largely on the time taken to launch the small boat, since turtles are relatively small and low on the water and drift quickly out of sight. All crew should therefore be familiar with this procedure and be aware of the relevant PPE so that the toolbox meeting can be as brief as possible.

A turtle release 'grab bag' should be prepared at the beginning of the job and kept on standby at a relevant place (e.g. on the bridge or at the FRC station). This bag should contain all of the necessary equipment for carrying out a safe turtle release operation and all of the PPE required for the personnel. Recommended equipment includes:

- PPE – life jackets, hard hats/helmets, safety shoes, survival suit (where required), sunglasses, safety glasses
- Several knives (clean and sharp)
- Wire cutters
- Scissors
- Gloves
- Camera for documenting release and identifying turtle species
- Notebook and pen (for noting any tag numbers)

- Towel (for keeping the turtle moist if brought onto the boat)
- Lifting cradle

Once the boat is launched, the OOW should provide the coxswain with the GPS position where the turtle was first observed. The boat should head to that position and then search for the turtle in the direction that the surface current is moving.

4. ESTABLISHING A SAFE TURTLE RELEASE PROTOCOL

While crew are likely to be familiar with cutting nets and other debris found in the marine environment, they are unlikely to be familiar with animal releases or with handling wild marine fauna. Relevant crew should therefore be provided with guidance on how to safely handle a turtle and release it from a net. An example turtle handling guidance document could include the following information:

- Approach the turtle slowly and use a boat hook to snag the fishing net and pull the animal(s) slowly towards the boat (with engine in neutral). Be careful that no net/rope goes near the stern of the boat (boat driver should watch/advise on this)
- Wherever possible, carry out an in-water rescue without bringing the animal onboard the boat
- If the turtle is taken onboard the FRC (e.g. when severely entangled), keep it the correct way up (on its belly) and shaded as much as possible. If it is very active then it can be placed briefly on its back to stop it moving around. Place a moist towel over it if the operation goes on for too long, particularly keeping the eyes moist
- To lift/manoeuvre a turtle, hold the carapace (shell) on either side. Try not to lift/manoeuvre it via its flippers. Never lift the animal by its head or tail which are sensitive areas. Do not use a boat hook to lift/manoeuvre turtles or you may cause the animal injury
- Be aware that sea turtles can be heavy. Olive ridley turtles are one of the smallest species and relatively easy to handle (62-70 cm carapace and adults weighing 35-45 kg). However, adult loggerhead and green turtles can weigh up to 159 and 180 kg respectively, and the largest species the leatherback can reach 2.7 m length with an average weight of 360 kg (and up to 900 kg). Consider the size of the animal before attempting to bring it onboard a boat – this is only safe for small turtles that can be lifted easily. Use a lifting cradle whenever possible
- Marine turtles are passive animals and are likely to be tired/subdued after being trapped in netting. However, they do have very powerful jaws that can do real damage, and when stressed they may bite. Keep your hands/arms away from the head and mouth area at all times
- When cutting net off the turtle, remember to cut away from the animal (rather than towards it) to avoid causing it injury. In the event that a turtle has a fishing hook in its mouth, cut the line as close to the hook as possible (taking care not to get bitten)
- If more than one turtle is trapped in a net, form a plan for which animal to start with (usually the least entangled) and handle them separately, one at a time

- Before releasing, check that all of the net has gone from around the flippers and head. Where possible, check the fore and hind flippers for plastic/metal tags and make a note of any numbers found
- Once the net has been removed, release the turtle immediately. Give it a gentle push away from the net/boat. If it has been brought onboard the boat, lower it slowly into the water vertically and head-first and gently release it. The boat engine should be in neutral at the time, and should not be moved forwards until all turtles have cleared the area
- Bring any discarded netting onto the boat (where practical) and back to the ship

5. SOME EXAMPLES

Every encounter with turtles trapped in fishing net or other marine debris is different, depending on the number, size and species of turtles caught and the type of debris that they are caught in. Crew should therefore be prepared to deal with a variety of situations, some examples of which are provided below.

Discarded nets might contain a single turtle, or numerous animals. Some turtles may already be dead while others are alive, and it is important to assess the situation carefully to avoid handling any decomposing animals as far as possible.

Cases involving a single trapped animal are relatively straightforward. In situations when multiple turtles are involved, the crew should discuss which animal to start with (probably the least entangled) and work at releasing them one at a time.



These turtles are tightly-packed in a small piece of netting off Equatorial Guinea. A rescue operation would probably start with the animals towards the rear of the picture which are least entangled and leave the heavily-entangled turtle in the foreground until last. Note the presence of dead animals below the surface.



A seismic crew releases six olive ridley turtles from a larger piece of net off Congo, a more straightforward operation as the turtles are not too tightly-packed together

Turtles might be caught in discarded fishing netting (most commonly) as above, or in other marine debris such as plastic as shown below.



A seismic crew carrying out an in-water release of an olive ridley turtle entangled in plastic debris off Angola

Turtle rescues should be conducted in water as much as possible. However, it might be easier to bring smaller turtles onboard the boat when they are heavily entangled



An olive ridley turtle onboard an FRC (ideally the turtle should be positioned on its belly rather than in this position)

6. FURTHER INFORMATION

For more information on releasing trapped turtles from fishing gear, the following references might be useful:

Gerosa, G. and Aureggi, M. (2001). Sea turtle handling guidebook for fishermen. Available online at:

<http://www.rac-spa.org/dl/Sea%20Turtle%20Handling%20Guidebook-%20English.pdf>

Balazs, G.H., Pooley, S.G. and Murakawa, S.K. (1995). Guidelines for handling marine turtles hooked or entangled in the Hawaii longline fishery: results of an expert workshop held in Honolulu, Hawaii March 15-17, 1995. Available online at:

<http://swfsc.noaa.gov/publications/TM/SWFSC/NOAA-TM-NMFS-SWFSC-222.PDF>

To identify marine turtles, the following guides are helpful:

<http://www.starfish.ch/reef/marine-turtles.html>

<http://www.reef.org/data/TurtleID.pdf>

For further information on marine turtle biology and ecology, please visit

Sea Turtle.Org - <http://www.seaturtle.org/>

Marine Turtle Research Group - <http://www.seaturtle.org/mtrg/>

Many thanks to the to the image contributors and to the various seismic survey vessels, party chiefs, captains and client reps whose ideas/experiences have contributed to this document.