

CODE OF PRACTICE FOR HANDLING AND DISPATCH OF SHARKS CAPTURED IN COMMERCIAL FISHERIES IN THE NORTHERN TERRITORY



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Introduction

This code of practice (CoP) contains information on best practice harvesting procedures and strategies for sharks captured in commercial longline and gillnet fisheries in the Northern Territory (NT). It provides guidelines for commercial fishers on how to handle various species of sharks, and describes specific evidence based techniques for their humane dispatch.

This code is based on scientific evidence and current expert knowledge. It follows a pragmatic approach to the welfare of aquatic animals (Arlinghaus et al. 2007, Rose et al. 2014, Browman et al. 2019, Diggles et al. 2023), which measures their welfare status using well-established physiological and functional parameters, such as minimisation of stress which otherwise can lead to poor welfare outcomes and reduced product quality (Poli et al. 2005, Diggles 2016).

From an animal welfare perspective, the overall aim of this CoP is to maximise shark welfare during capture by minimising stress within the constraints of the practices inherent to the relevant fishing sector (Mazur and Bodsworth 2022). Using this pragmatic approach, the Aquatic Animal Welfare Working Group (AAWWG) which was formed under the Australian Animal Welfare Strategy (AAWS, 2005-2014), developed a range of Overarching Welfare Principles which relate to fishes (including sharks) harvested from the wild in commercial fishing industries in Australia.

Out of the eight Overarching Principles developed by the AAWWG, as pointed out by Mazur and Bodsworth (2022)² the three that are most relevant to the commercial wild harvest industry are:

1. Timely handling from capture to death is essential to minimise stress;
2. Capture methods should be designed to minimise the capture of unwanted species; and
3. Any fish selected for harvest should be killed as rapidly as possible, by humane means suitable for the species.

Brain destruction by pithing or “Ikijime” is the fastest way to dispatch finfish, resulting in the lowest levels of stress and maximising the quality and shelf life of the resulting fish product (Poli et al. 2005, Diggles 2016). Once the brain is destroyed, the fish is immediately killed, which drastically reduces stress, lactic acidosis,

² <https://www.frdc.com.au/project/2019-023>

bruising from thrashing around and other undesirable changes which occur if the fish is left to die slowly in air or on ice. Because these stresses are avoided, brain destruction can also improve fillet quality and storage life by minimizing pH drop due to lactic acid buildup, and also delaying the onset of rigor mortis (contraction of muscle fibres as a result of calcium leakage, in the absence of Adenosine Triphosphate (ATP)– the muscles energy source required to contract and relax the muscle, see Lowe et al. 1993). Rapid brain destruction also greatly reduces the likelihood of fishers being injured by sharks during handling and processing, which improves occupational health and safety (OH&S). When capturing and handling sharks (and other large finfish) prior to dispatch, it is important that health and safety outcomes for commercial fishers remain the prime consideration, otherwise injury or death to fishers could occur.

This CoP was developed following collection of information on humane dispatch of a range of shark species during a recent research project (FRDC Project 2022-028, ‘*Development of resources and equipment to enable best practice in the humane dispatch of sharks caught by commercial fishers in the Northern Territory*’) (Diggles 2024). Results from that research have indicated that some dispatch methods are more effective and appropriate for smaller species of sharks <120 cm (4 feet) long (including juveniles of larger shark species), while all sharks over 210 cm (7 feet) total length should ideally be dispatched using firearms and/or captive bolt tools. The most appropriate dispatch method for use on sharks between 120 cm and 210 cm will depend on several variables including the size and species of shark, as shown in Table 1. Firearms and/or captive bolt tools are not recommended for sharks smaller than 120 cm, as there are more economical ways to dispatch smaller sharks that are equally humane while also representing a lower OH&S risk to fishers (Table 1, see also Sections 2.4, 2.5 and 2.6).

Table 1. Summary of recommended dispatch methods for sharks in the Northern Territory from Diggles (2024). Specific information on brain location for each species listed in this table is available at www.ikijime.com, and also contained in Appendix 1.

	Small sharks (less than 120 cm/ 4 feet long)	Medium sharks (120-210 cm /4-7 feet long)	Large Sharks (over 210 cm/7 feet long)
Example species	Blacktip reef, creek whaler, milk, spot-tail, winghead sharks	Blacktip, hammerhead (scalloped), snaggletooth, spinner sharks	Bull, hammerhead (great), lemon, pigeye, tawny, tiger sharks
Preferred method	Ikijime	Captive bolt, firearm	Captive bolt, firearm
Optional methods	Percussive stunning, spinal section	Percussive stunning	-
Not recommended	Captive bolt*, firearm*	Ikijime**, spinal section	Ikijime**, percussive stunning*, spinal section

* Not recommended due to additional unnecessary OH&S risk and/or risk of damage to equipment

** Not recommended due to thick skin preventing penetration of ikijime spike

This CoP includes standard operating procedures and links to additional information and resources on how to achieve evidence-based best practice in harvesting and dispatch of sharks in the NT. The findings and recommendations from recent scientific research conducted to examine a range of dispatch methods have been incorporated into this CoP, to ensure that harvesting of sharks in the NT is conducted in the most humane manner possible. It is expected that fishers involved in the capture and dispatch of sharks under this CoP will have adequate training, or otherwise operate under the supervision of a fisher experienced in the humane dispatch of sharks.

1. Best practice in capture and handling of sharks

While this document focuses on the welfare of sharks during this process, human safety **MUST** always be of paramount importance. Sharks are dangerous animals, and occupational health and safety (OH&S) should be considered at all times during the course of shark capture and handling operations. Fishers should **NEVER** compromise their own safety during this process.

1.1 Method 1: Hook and line, or longline

The following best practices are recommended in longline or hook and line fisheries either targeting sharks and/or which encounter them as bycatch (Mazur and Bodsworth 2022). These practices include:

- A. Gear should be suitable for the target species (adequate line strength and appropriate hook size), and attended at all times (maximum soak time of three hours for longlines);
- B. Avoiding fast winching speed to allow time for careful removal of animals from hooks;
- C. Careful handling of sharks and other finfish during dehooking (this may be difficult and dangerous due to a thrashing animal) using wet gloved hands. Minimise handling where possible, including support the body of the fish to avoid damage to internal organs or the backbone;
- D. Striving to immediately dehook and release non-target bycatch species alive whilst working towards continuous improvement in gear selectivity to help avoid non-target bycatch. This includes keeping the fish in the water where possible, and cutting the line as close to the hook as possible if hooks cannot be quickly retrieved without damaging the fish (Figure 1A); OR
- E. Immediate dispatch of harvested sharks or other finfish once they are brought alongside (Figure 1B) or on board the boat. See Section 2 for best practice methods for dispatch of sharks; and
- F. Following dispatch, careful handling and prompt processing of products into cold storage (ice slurry/brine, or freezer) will maximise product quality and food safety. This also includes minimising the time carcasses remain on deck, keeping work surfaces cool and clean, and working in the shade (or at night) to avoid the direct heat of sun exposure.



Figure 1. Bycatch species should be dehooked or the line cut while they remain in the water (1A, left), while harvested species should be immediately dispatched by brain inactivation or destruction once they are brought alongside (1B, right), or on board the boat (see Section 2).

1.2 Method 2: Gill net

The following best practices are recommended in gill net fisheries either targeting sharks and/or those which encounter them as bycatch (Mazur and Bodsworth 2022). These practices include:

- A. Mesh size should be suitable for the target species. Maximum net soak time of three hours;
- B. Nets hauled at speeds which enable safe removal of catch;
- C. Careful removal/handling of sharks or other finfish bycatch (this may be difficult and dangerous due to a thrashing animal) using wet gloved hands (Figure 2A). Minimise handling where possible;
- D. Immediate release of non-target bycatch (keeping any live fish in the water if possible, or else support the body of the fish to avoid damage to internal organs or the backbone), while working towards continuous improvement in gear selectivity to help avoid non-target bycatch; OR
- E. Immediate dispatch of harvested sharks or other finfish either before (preferable) or after they are removed from the net. See Section 2 for best practice methods for dispatch of sharks; and
- F. Following dispatch, careful handling and prompt processing of products into cold storage (ice slurry/brine, or freezer) will maximise product quality and food safety (Figure 2B). This also includes minimising the time carcasses remain on deck, keeping work surfaces cool and clean, working in the shade (or at night) to avoid the direct heat of sun exposure, and so on.

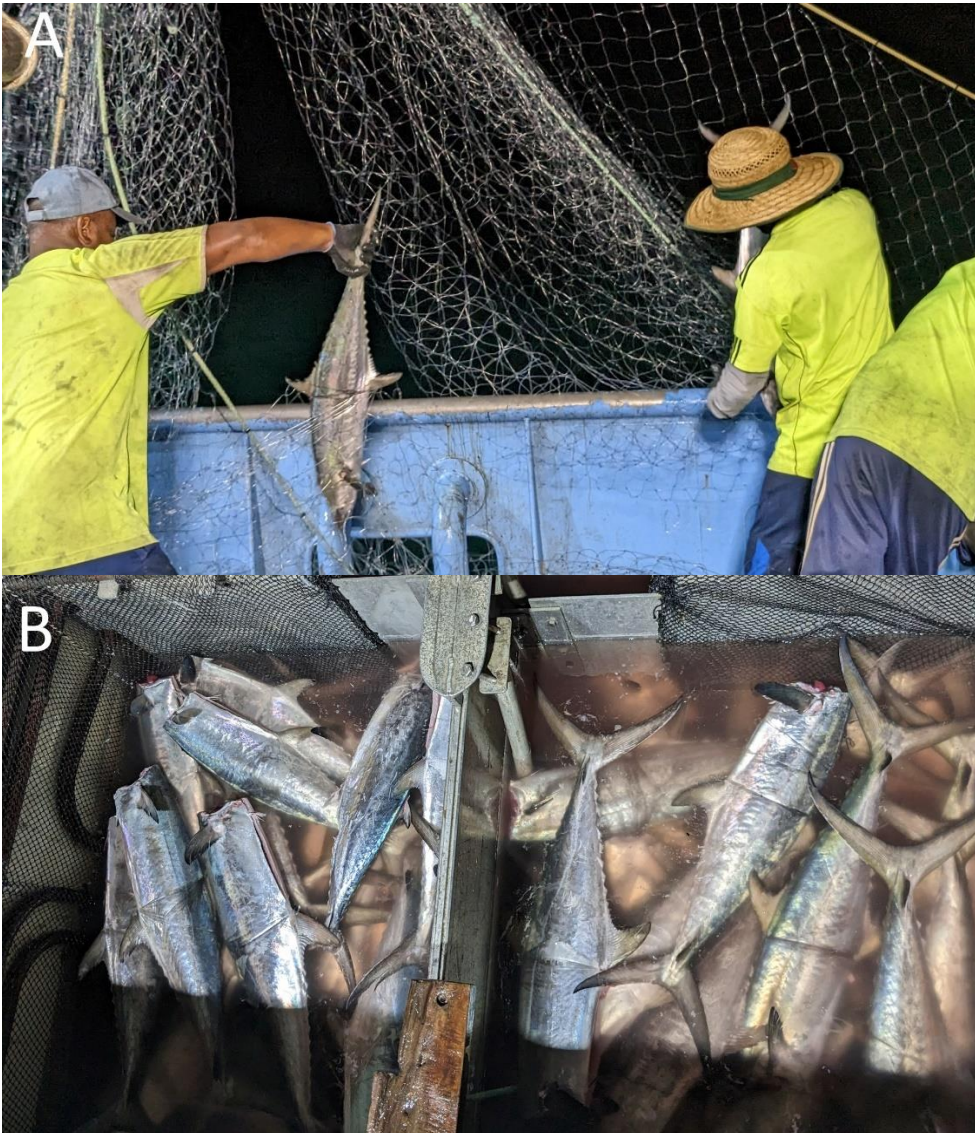


Figure 2. Sharks and other finfish should be removed from the gill net as quickly as possible using wet gloved hands (2A, top). Handling of non-target bycatch as they are removed from the net should be minimised, keeping any live fish in the water if possible.

Harvested fish should be immediately dispatched to maximise fish welfare (see Section 2), and then processed promptly into cold storage such as ice slurry/brine (2B, bottom) or freezers to maximise product quality and food safety.

2. Best practice in humane dispatch of sharks

Depending on their size and the capture method used, sharks to be retained may be dispatched at the side of the boat prior to bringing them on board (Figure 1B), or on the deck after capture (Figure 6B). **While this document focuses on the welfare of sharks during this process, human safety MUST always be of paramount importance. Sharks are dangerous animals, and occupational health and safety should be considered at all times during the course of shark capture and handling operations. Fishers should NEVER compromise their own safety during this process.**

2.1 Dispatch equipment

Destruction of the brain by the ikijime process using an ikijime spike (Figure 3A) or percussive stunning using appropriate tools (Figure 3B-E), are both highly effective for immediate dispatch of smaller species of sharks <120 cm (less than 4 feet) long (including juveniles of larger shark species) (Table 1). The most appropriate dispatch method for use on sharks between 120 cm (4 feet) and 210 cm (7 feet) long will depend on several variables including the size and species of shark (Table 1). All retained sharks over 210 cm (7 feet) long should be immediately dispatched by destruction of the brain using firearms (Figure 4A) and/or captive bolt tools (Figures 4B-C) (Table 1). Consumables required for firearms or captive bolt tools are shown in Figure 5. See Sections 2.2-2.6 for specific details on various humane dispatch methods.



Figure 3. Dispatch equipment for use on small sharks (<120 cm/4 feet) and larger fishes. A = ikijime spike. Percussive stunning tools include hammers (ballpeen =B or 4lb sledge =C), baton (=D), or crowbar (=E).

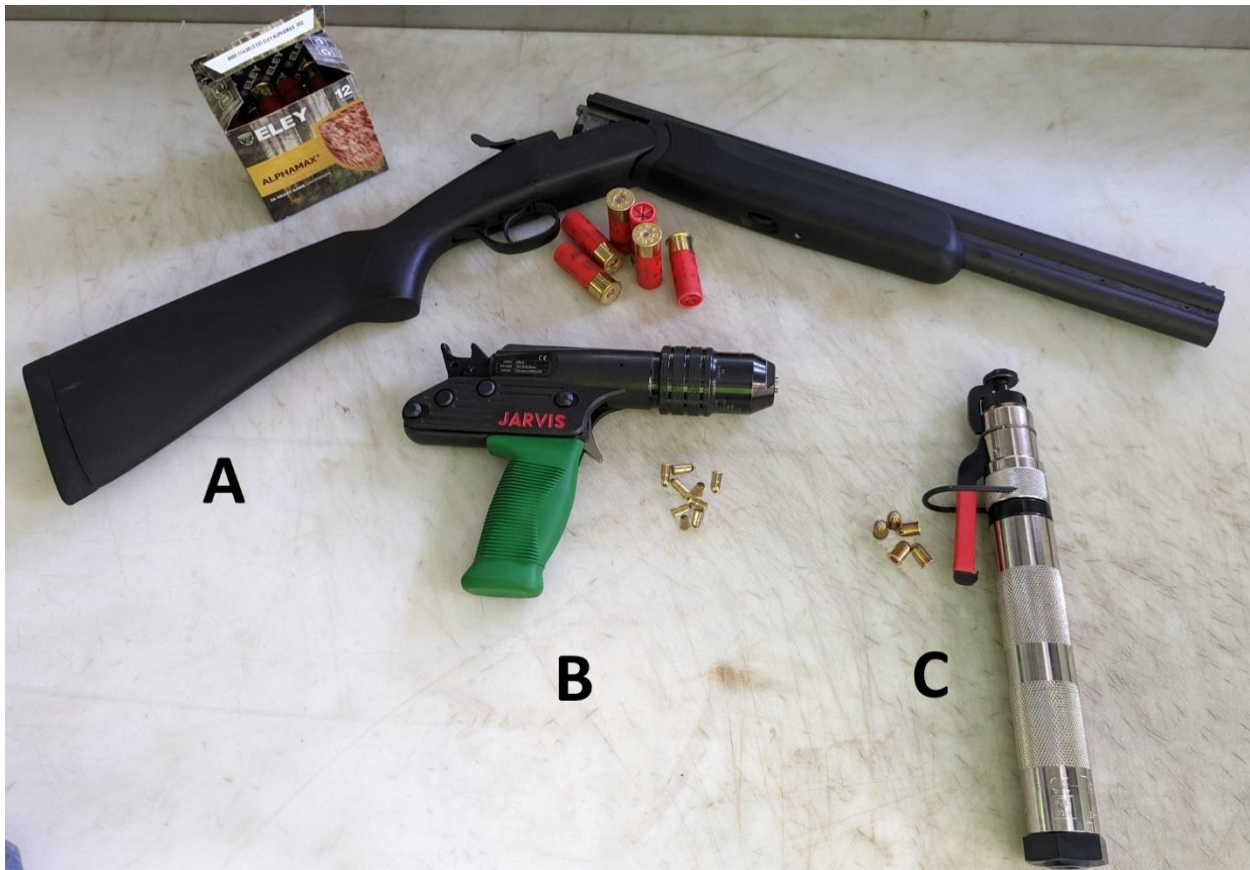


Figure 4. It is recommended that all retained sharks over 210 cm (7 feet) long are dispatched by brain destruction using either firearms (A= 12 gauge shotgun) and/or captive bolt tools (B = Jarvis PAS 0.25R, C = Blitz-Kerner). The most appropriate dispatch method for use on sharks between 120 cm (4 feet) and 210 cm (7 feet) long will depend on several variables, including the size and species of shark (Table 1).



Figure 5. Consumables required for firearms or captive bolt tools. A = 12 gauge shotgun (Falcon 1200 Trap Cartridge, c. 70 cents ea.), B = Jarvis PAS 0.25R captive bolt tool (black activator – 260 mg charge, c. 35 cents ea.), C = Blitz-Kerner captive bolt tool (blue or red activator – 410/460 mg charge, c. \$1.50 ea.).

2.2 Dispatch Method 1: Captive Bolt

Field trials have found that dispatch by brain destruction using captive bolt tools such as the Blitz-Kerner (Figure 4B, <https://countryvet.com.au/product/blitz-captive-bolt-slaughter-device-each/>) or Jarvis 0.25R PAS pistol (Figure 4C, <https://jarvisanz.com.au/product/pas-type-p-penetrating-25r-long-length/>) is the "gold standard" representing the most humane way to dispatch sharks. This method is recommended for all sharks over 120cm (4 feet) long and up to at least 360 cm (12 feet). However, captive bolt tools are not recommended for sharks less than around 120 cm long, as there are more economical ways to dispatch smaller sharks that are equally humane while also representing a lower OH&S risk to fishers. Furthermore, damage to the captive bolt tools, or the boat, can also occur if they penetrate right through smaller sharks.

Captive bolt tools use a "blank" activator charge to project high pressure, high speed gas into a cartridge chamber. After the projectile load is ignited, the captive bolt is accelerated, exits the tool to a defined length (around 6-7.5 cm or 2.5-3 inches, Figure 6A), then is drawn back into the tool using a spring or other type of return mechanism. Captive bolt tools are therefore a type of firearm, and all the usual firearm safety procedures apply, including always having the tool unloaded while on the deck until immediately prior to use. To safely use captive bolt tools, always read the manufacturers instructions first prior to their first use, and apply those safety principles at all times. Regular maintenance of these tools is also required (e.g. lubrication with WD40) and their serviceability should be inspected on a daily basis.

One drawback for the use of captive bolt tools is that they need to be carefully aimed at the brain by placing them on the head of the shark (Figure 6B), and hence they can only be applied once the shark is on the deck or otherwise restrained prior to being brought on board the boat (see video of dispatch of a 260 cm lemon shark at <https://www.youtube.com/watch?v=V18ehpf7kx4>). Because of this, it is recommended that more active and/or larger sharks are stunned or dispatched first as they are brought alongside the boat using a firearm (Figure 1B, see also <https://www.youtube.com/watch?v=R9anr4Wyalk> and Section 2.3). Once stunned (or killed if the shot has penetrated the brain, see Section 2.3), they can be brought on board, after which captive bolt tools can be used on the deck for final dispatch, if required (see video of dispatch of a 280 cm bull shark at https://www.youtube.com/watch?v=_TjFrDiGcxA).

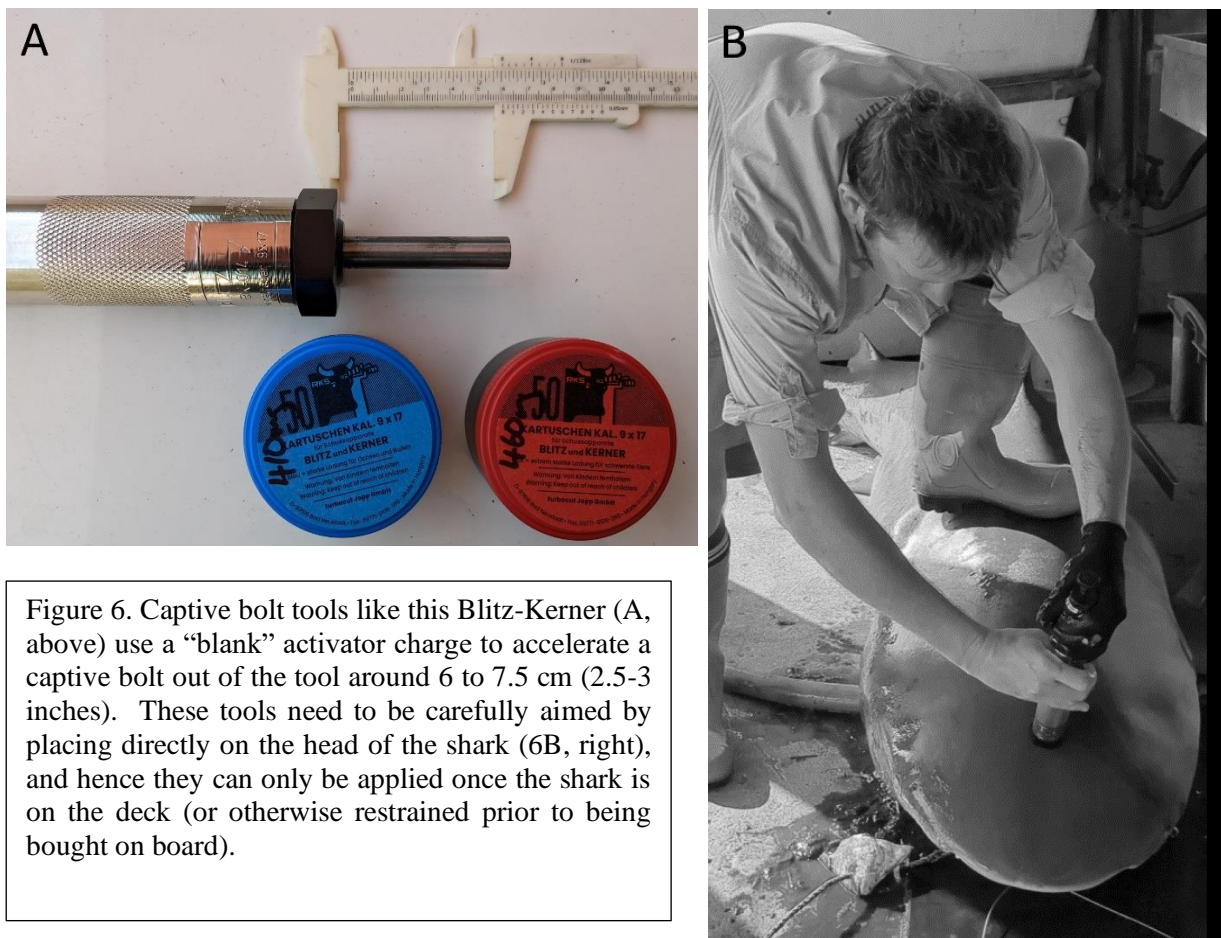


Figure 6. Captive bolt tools like this Blitz-Kerner (A, above) use a "blank" activator charge to accelerate a captive bolt out of the tool around 6 to 7.5 cm (2.5-3 inches). These tools need to be carefully aimed by placing directly on the head of the shark (6B, right), and hence they can only be applied once the shark is on the deck (or otherwise restrained prior to being brought on board).

2.3 Dispatch Method 2: Firearm

Firearms are particularly useful for dispatch of the largest of sharks (over 210 cm (7 feet) up to at least 360 cm (12 feet) long), as they can be used alongside the boat while the shark is still in the water (Figures 1B, 7A), and also see <https://www.youtube.com/watch?v=R9anr4Wyalk>). For obvious safety reasons, the use of firearms on sharks once they are brought on board the boat is not recommended, due to the high chance of ricochet and damage to the boat and/or injury or death of fishers.

Field data shows that a significant percentage of sharks larger than 210 cm may survive being shot with a firearm if they are not accurately hit in the brain (Figure 7B), which even at close range can be difficult to achieve on a moving boat with very large and/or active sharks. Nevertheless, a shot to the head region inflicts a significant stunning effect, which allows fishers to restrain large sharks alongside the boat, or bring them on board where a captive bolt tool can be used to dispatch the shark before the stun effect abates.

For sharks over 210 cm long, a 12 gauge break action shotgun loaded with trap ammunition used at close range at the side of the boat has been found to be relatively safe and effective for bull, tiger and hammerhead sharks up to 360 cm long, provided the shark's head is above the water (Figure 7A). High velocity medium or high calibre rifles (.222, .243, .270 or greater) may be more suitable if there is any water between the fisher and the shark. In all cases, the usual firearm safety conditions and regulations need to be adhered to, including always having the gun unloaded until immediately prior to use. A break action shotgun provides an extra margin of safety as it can be loaded, but kept broken, up until a few seconds prior to use (Figure 7C), which eliminates the chances of accidental discharge of the gun if, for example, the fisher slips on the deck. When firing guns on boats, care must be taken to ensure the trajectory of the shot is away from the boat and any people in the vicinity. Care must also be taken to avoid water ricochet.

The point of aim when shooting a shark is the brain, which lies in the middle of the head level with, or slightly behind, the eyes as seen from the top of the head (see Appendix 1 for diagrams of brain locations of sharks listed in Table 1, also at www.ikijime.com). When shooting from the side, the eye is a useful target, while shooting from under the head (through the jaw) can be effective, but it is not recommended due to the high risk of severing the line (and thus losing the shark). Regular maintenance of guns is required, and their serviceability should be inspected on a daily basis.

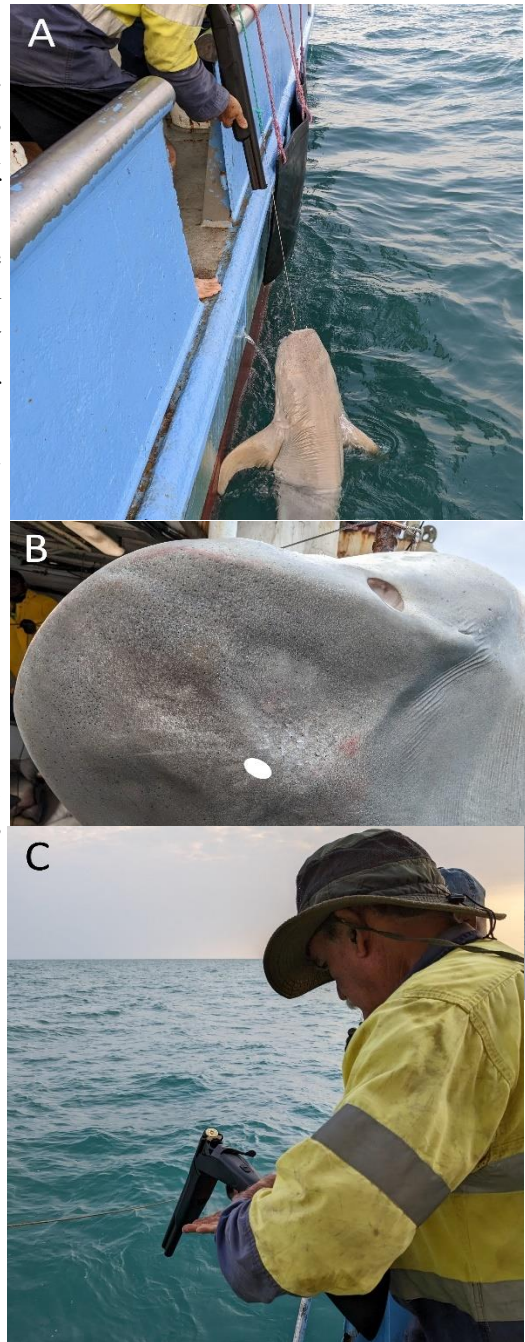


Figure 7. Firearms should only be fired alongside the boat while the shark is still in the water (A, top), never on the deck. The head should be above water, but even so, some large sharks may survive being shot if they are not accurately hit in the brain, like this 360 cm tiger shark (B, middle) which was missed to the right of its brain location (shown by white dot). Nevertheless, a shot to the head region inflicts a significant stunning effect, allowing any surviving sharks to be dispatched with a captive bolt. Break action shotguns provide an extra margin of safety as they can be loaded, but kept broken, up until a few seconds prior to use (C, below).

2.4 Dispatch Method 3: Ikijime

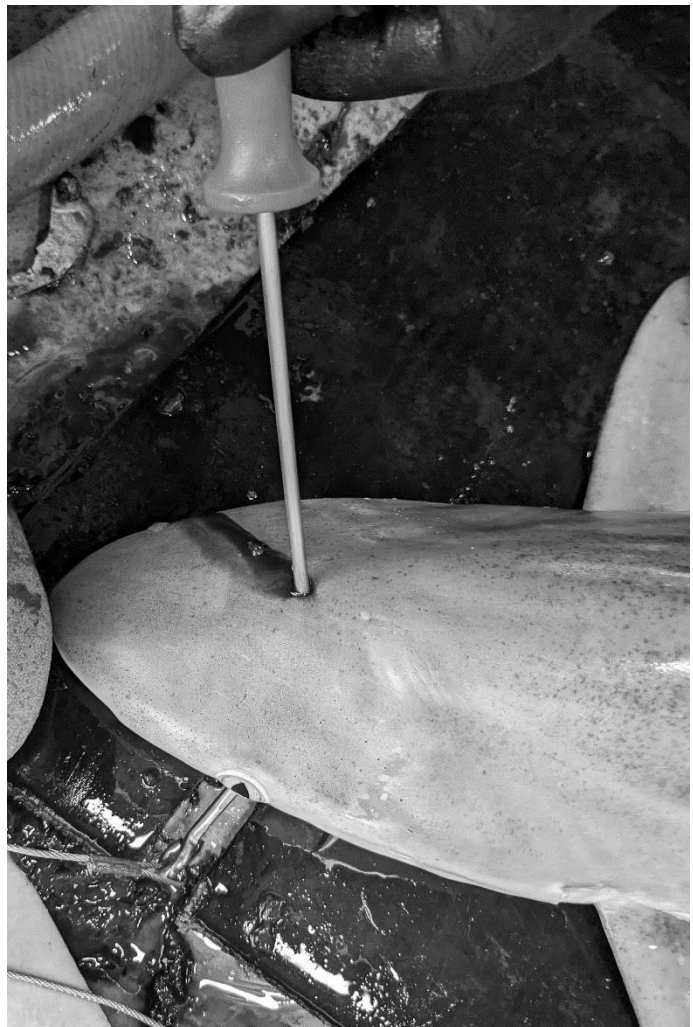
The ikijime method involves manual destruction of the brain of finfish and sharks using a sharp spike or other suitable implement, causing immediate brain death by pithing. The ikijime procedure can be done using either a sharp knife, a sharpened screwdriver, or by using specially designed ikijime tools (Figure 3A). The method involves quickly and firmly inserting the spiking tool into the head of the fish, followed by wiggling the tool around to destroy the brain. When performed correctly, the fish will be dispatched immediately by brain destruction and after some transient twitching, its body will go limp.

Field trials have found that ikijime with a suitable sharp tool is highly effective for humane dispatch of some species of smaller sharks (Table 1). However, this technique is recommended only on sharks <120 cm (4 feet) long, due to the fact that it becomes extremely difficult to penetrate the skin of many species of sharks with an ikijime spike once they are above this size.

It may be possible to use this method on sharks larger than 120 cm long if the sharks' tough skin is previously penetrated (for example, using a knife). Under such circumstances, ikijime may be used for dispatch of certain less active species of shark up to around 210 cm (7 feet) long, provided the shark is stunned or otherwise safely immobilised to allow manual insertion of the spike. However, for other species, such as tawny sharks, the skin and skull of even a 150 cm (5 foot) long specimen may prove to be impossible to penetrate manually using a knife or ikijime spike. For these reasons, there is a definite upper size limit for sharks beyond which it is unsafe and/or impossible to perform manual brain destruction using the ikijime method, and we suggest that limit is around 210 cm (7 feet) long.

To ensure quick and accurate destruction of the brain, placement of the ikijime spike is the most critical aspect of this procedure. In sharks, the brain is located in the middle of the head level with, or slightly behind, the eyes. Resources have been developed to show the brain locations of 15 of the most common species of sharks encountered by commercial fishers in the NT (see Appendix 1). These, together with a large database of brain locations for finfish, can also be found online at www.ikijime.com, or through the Ikijime Tool phone applications available on [iTunes](#) or [Google Play](#). It is likely that other sharks not in the database will have similar brain locations.

Figure 8. The ikijime method involves manual destruction of the brain using a sharp spike or other suitable implement. Accurate placement of the spike, followed by wiggling the tool around to destroy the brain, are the most critical aspects of this procedure in order to ensure immediate brain death by pithing. For safety and practical reasons, this method is only recommended for sharks smaller than around 120 cm, like this 110cm spot tail shark.



2.5 Dispatch Method 4: Percussive stunning

Percussive stunning involves “knocking on the head” of the shark using a suitable heavy blunt instrument, such as a hammer, club or similar tool (Figure 3B-E). When hitting occurs sufficiently hard enough in the vicinity of the brain, it can result in permanent loss of brain function. For large fishes such as sharks, a relatively heavy hammer, such as a large ball peen hammer (Figure 3B) or small (4 lb) sledge hammer (Figure 3C) is more likely to obtain the desired effect than a relatively light aluminium baton or “fish bat” (Figure 3D).

Indeed, due to their light weight and relatively lower hitting power, aluminium batons are only recommended for sharks less than 120 cm (4 feet) long, for which it is recommended that up to 6 or more blows are administered in quick succession. For larger sharks (over 120 cm and up to around 210 cm (7 feet)), heavier ball peen hammers or sledge hammers provide increased hitting power and can be effective provided multiple blows are accurately placed as rapidly and forcefully as possible. When performed correctly, the shark will lose brain function, ceasing any co-ordinated movements, and will not recover.

Field trials have shown that, as for ikijime (see Section 2.4), there is a definite upper size limit for sharks beyond which it is difficult or impossible to achieve loss of brain function using the percussive stunning method. We suggest that limit is around 210 cm (7 feet) long for most species of shark (using a heavy hammer), but it may be less than 150 cm (5 feet) for other species with strong skulls, such tawny sharks.

It is important that the handle of the implement used is maintained as clean and dry as possible, otherwise the hammer may slip and go flying in an uncontrolled manner when it is being swung, with potential to seriously injure or even kill a nearby person. The only other critical aspect of this procedure is that blows need to be directed at the brain for maximum effect. In most sharks, the brain is located in the middle of the head level with, or slightly behind, the eyes (Figure 9). Resources have been developed to show the brain locations of 15 of the most common species of sharks encountered by commercial fishers in the NT (see Appendix 1). These, together with a large database of brain locations for finfish, can also be found online at www.ikijime.com, or through the Ikijime Tool phone applications available on [iTunes](#) or [Google Play](#). It is likely that other sharks not in the database will have similar brain locations.

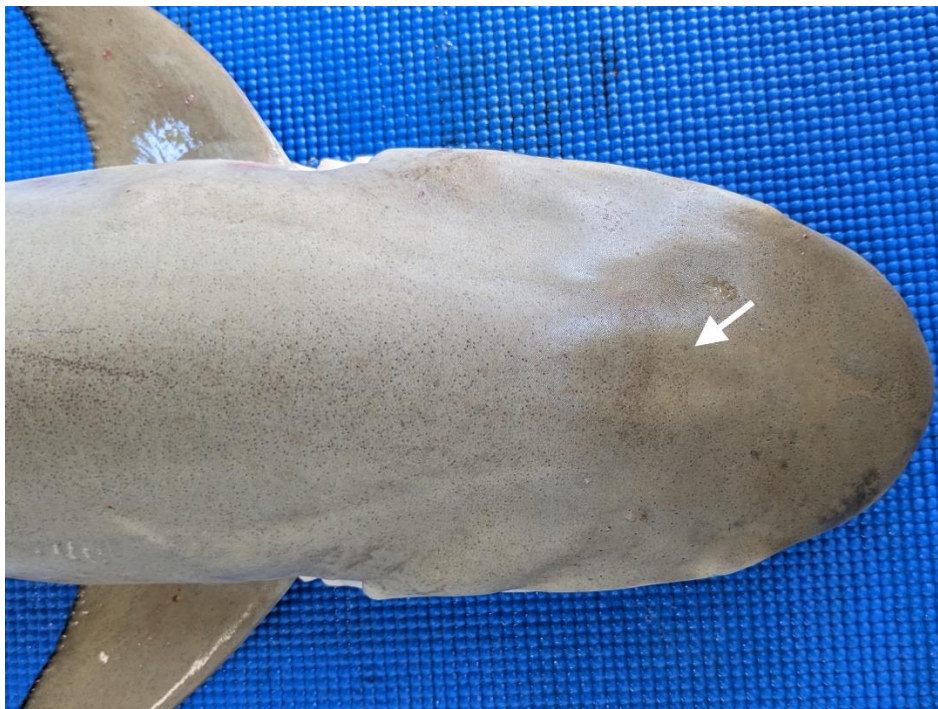


Figure 9. Percussive stunning involves use of an appropriately weighted implement to inflict several sharp blows to the head in the vicinity of the brain (arrowed). This 120 cm blacktip reef shark was dispatched using a ball peen hammer, which left a noticeable dent in the head.

2.6 Dispatch Method 5: Spinal Section

The final method of humane dispatch of sharks detailed in this CoP is spinal section. This process involves rapid severing of the spine behind the head with a sharp knife (Figure 10A), preferably followed by immediately inserting a rod into the brain (pithing). This method is also used in the dispatch of small crocodiles (Australian Government 2009).

Spinal section can only be applied on sharks small enough to be completely controlled by the processor, and hence we recommend that the method is only applied to small sharks less than 120 cm long. Obviously a very sharp knife is required in order to effectively penetrate the tough skin of sharks, which means that knives (including the preferred serrated knives) will need to be regularly resharpened (Figure 10B) if this method is used. The incision should begin at the top of the head around level with the first or second gill slit, after which the knife should rapidly cut through to sever the spinal column (Figure 10a).



Figure 10. This 120 cm blacktip shark (A, left) was dispatched by spinal section using a sharp knife prior to being processed and finned. The skin of sharks is tough, which means that to effectively implement this method, knives (including serrated knives) need to be sharpened regularly (B, right).

2.7 Final comments

For all of the dispatch methods discussed in this CoP, due to the anaerobic physiology and neural organisation of sharks, some reflex activity may remain evident after dispatch. This is not indicative of inhumane or improper methods of dispatch or that any suffering is involved. It simply reflects the ability of the sharks muscles to continue operating independently (often under stimulation of spinal nerves) after the brain has been totally destroyed (Australian Government 2009).

3 References and further reading

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4. Acknowledgements

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5 Appendix 1: Brain location information for sharks commonly captured in the NT

Blacktip reef shark (*Carcharhinus melanopterus*)



A medium sized shark with yellowish-brown body (whitish below) and black tips on most fins. Differs from other sharks with black fin tips in having a white margin around the black tip, especially on the dorsal fin. Maximum size around 200 cm.



Brain location of blacktip reef shark

Blacktip reef sharks less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long should be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-blacktip-reef/



Blacktip shark (*Carcharhinus tilstoni* , *C. limbatus*)



Medium sized sharks with dark grey body, white to yellowish white belly, black tips on all (or most) fins and a thin dark margin along the front and rear margin of the caudal fin. Maximum size around 285 cm.



Brain location of blacktip shark

Blacktip sharks less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long should be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-blacktip/



Bull shark (*Carcharhinus leucas*)



A robust shark with a stout body and a short, blunt snout. Teeth triangular and dorsal fin broad with a curved tip. Grey, greyish-brown to very dark steel-grey colour above, whitish or yellowish below with dark margins to the pectoral fin and tail. Bull sharks can have conspicuous darkened bald patches on their upper body between the first and second dorsal fins, due to infection with the monogenean fluke *Dermophthirius*. Maximum size around 390 cm.



Brain location of bull shark

Bull sharks less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long should be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-bull/



Creek whaler (*Carcharhinus fitzroyensis*)



A relatively small but stout shark, grey bronze above and whitish below, with a pointed snout and pale margins on the pectoral fins. Maximum size around 135 cm.



Brain location of creek whaler

Creek whalers less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long should be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-creek-whaler/



Hammerhead, Great (*Sphyrna mokarran*)



A large hammerhead shark, grey to bronze grey above becoming white below. The front margin of the head, whilst curved in juveniles (below) is almost straight in adults with a slight central notch. The first dorsal fin is very tall and curved with a pointed tip, and the second dorsal and pelvic fins are also tall with deeply concave rear margins. Maximum size at least 600 cm.



Brain location of great hammerhead shark

Great hammerhead sharks less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long should be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-hammerhead-great/



Hammerhead, Scalloped (*Sphyrna lewini*)



A medium to large hammerhead shark, olive green, bronze or brown-grey above becoming white below. The front margin of the head is scalloped in adults with a pronounced central indentation. The first dorsal fin is moderately tall with a straight rear margin and the anal fin also has a straight rear margin. Maximum size around 430 cm.



Brain location of scalloped hammerhead shark

Scalloped hammerhead sharks less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long should be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-hammerhead-scalloped/



Lemon shark (*Negaprion acutidens*)



A large shark, yellowish to light brown above becoming white below with a broad blunt snout, relatively small eyes and large triangular pectoral fins. Second dorsal fin nearly the same size as the first dorsal. Maximum size around 380 cm.



Brain location of lemon shark

Lemon sharks less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long should be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-lemon/



Milk shark (*Rhizoprionodon acutus*)



A small shark, bronze to light grey above becoming white below with a sharp snout, relatively large eyes and no body markings except for occasional dark margin on the upper caudal fin. Origin of second dorsal fin well behind the anal fin. Maximum size around 135 cm.



Brain location of milk shark

Milk sharks can be humanely dispatched by ikijime, a firm knock to the head, or spinal section. For more information, see:

www.ikijime.com/fish/shark-milk/



Pigeye shark (*Carcharhinus amboinensis*)



A robust shark with a stout body and a short, blunt snout. Often mistaken for the bull shark, but the pigeye shark has a tall, erect dorsal fin that is four times the height of the second dorsal, while the dorsal fin of the bull shark is more triangular and only 3 times the height of the second dorsal. Maximum size around 280 cm.



Brain location of pigeye shark

Pigeye sharks less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long should be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-pigeye/



Snaggletooth shark (*Hemipristis elongata*)



A light grey or bronze coloured weasel shark with no prominent markings. They have a broadly rounded snout, long curved, saw-edged teeth in the upper jaw, and hooked lower teeth protruding from the lower jaw. Maximum size around 240 cm.



Brain location of snaggletooth shark

Snaggletooth sharks less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long should be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-snaggletooth/



Spinner shark (*Carcharhinus brevipinna*)



A highly athletic medium size shark, with a dark grey body, white to yellowish white belly, pointed snout and black tips or margins on most fins, including the anal fin (absent in blacktip sharks). Maximum size around 300 cm.



Brain location of spinner shark

Spinner sharks less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long should be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-spinner/



Spottail shark (*Carcharhinus sorrah*)



A small to medium sized shark, with a grey body, white to yellowish white belly, moderately rounded snout and black tips on the lower caudal, second dorsal and pectoral fins, but not the dorsal fin. Maximum size around 160 cm.



Brain location of spottail shark

Spottail sharks less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long can be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-spottail/



Tawny shark (*Nebrius ferrugineus*)



A bulky, medium sized nurse shark, with a tan brown body, small eyes and broad snout with short nasal barbels. Maximum size around 330 cm.



Brain location of Tawny shark

Tawny sharks less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long should be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-tawny/



Tiger shark (*Galeocerdo cuvieri*)



A large shark with a stout grey body, with numerous distinctive darker vertical stripes dorsally, a short, blunt snout and distinctive cockscomb-shaped teeth. Maximum size around 750 cm.



Brain location of tiger shark

Tiger sharks less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long should be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-tiger/



Winghead shark (*Eusphyra blochii*)



A small to medium sized hammerhead shark with a very wide (around half the body length), but very narrow wing-like head. Maximum size around 240 cm.



Brain location of winghead shark

Winghead sharks less than 120 cm (4 feet) long can be humanely dispatched by ikijime or a firm knock to the head. Sharks larger than around 120 cm (4 feet) long can be dispatched with a captive bolt tool or firearm (with appropriate safety precautions). For more information, see:

www.ikijime.com/fish/shark-winghead/



