



Handle with care

**Lessen the suffering of the fish
in EU wild capture fisheries**

**Policy Briefing and
Recommendations**

2020



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Overview

Wild capture fisheries are the last major food sector and last animal producing sector to be based on wild harvest. Fishing activities take place far out of sight of most citizens, and wild capture fisheries have operated and developed without considering their impact on the fish they catch.

This can change. Commercial fishers should become the stewards of the sea. Fish are their livelihood: any improvement to the way fish are captured, handled and slaughtered, i.e. an improved approach to animal welfare in wild capture fisheries, is an improvement to their harvest. The reduction of stress of fish before slaughter and the reduction of physical injuries during capture have proven to have a beneficial effect on the quality and safety of the fish food products.

The wide range of technologies and methods used in wild capture fisheries give commercial fishing operators the opportunity to improve their fishing practices and lessen the suffering of the fish. Of major importance for welfare, and common across fishing methods, is the

need to accelerate the transfer of technology for stunning at slaughter from aquaculture to fishing vessels. Slaughter technology is well advanced, the benefits for the fish and for product quality are well established, and the long lack of oxygen (asphyxiation) experienced by so many fish today can be avoided. Beyond slaughter, many easy and immediate fixes are achievable just by reviewing the organisation of equipment and handling practices with a view to minimising handling.

Physical injuries should be avoided, the time from capture to killing should be minimised, and live handling should be minimised. Nets should be designed to minimise physical injuries, crowding procedures should be carried out without eliciting a maximal stress response, pumps rather than nets should be used to bring fish onboard, and fish should not be left to asphyxiate at any time.

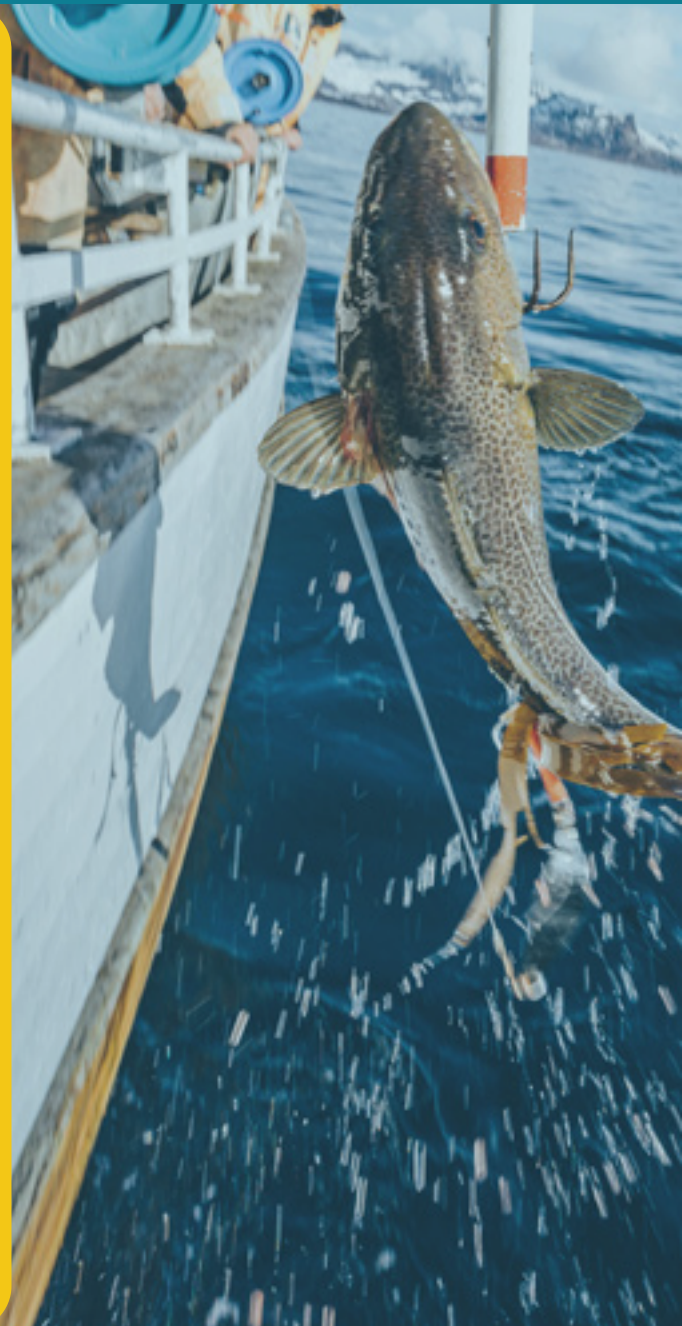
A concerted effort is required from the fishery sector and from regulators to implement meaningful improvements.

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Wild capture fisheries have operated and developed without considering their impact on the fish they catch. This can change!

High Level Policy Recommendations:

- Fisheries policy should pay full regard to animal welfare. The lessening of fish suffering should become the main objective in fishing practices and culture.
- More focus should be placed on product quality and fish health.
- More focus should be placed on making fishers the stewards of the sea, promoting localised responsibility for managing fishing levels and activities, and with strong enforcement by the EU.
- Fish labelling should give the consumer information that allows them to make welfare-based choices, through the fishing method categories used, and through explicit welfare guarantees.
- Research funding programmes should prioritise fish welfare in wild capture fisheries.
- Fishery subsidy regimes should prioritise improvements in fish welfare in wild capture fisheries, and in particular support innovators in implementing and developing better practices.
- Subsidies should only be available to fishing vessels that implement best welfare practices.



1. AFTER CAPTURE

Slaughter and handling practices in wild capture fishing



1.1. Slaughter

Wild capture fishing equipment and procedures have not been designed with animal welfare in mind. There is an urgent need to improve fishing practices by further developing and implementing the least painful slaughter practices for fish. In most cases in wild capture fisheries, the caught fish die incidentally during the capture and processing stages, rather than through effective and painless killing methods by the fishers. For example, once caught, fish commonly have to suffer from lack of oxygen (i.e. asphyxiation) on

board or in ice, they might fall on the deck or get stuck in conveyor belts, and are being held out of water for long periods until they die or are gutted alive. The time from bringing onboard to killing should be minimised, and equipment and procedures should be designed to minimise handling and the severity of its impacts.

To help improve these practices, effective stunning technology, which is available from the aquaculture sector, needs to be further adapted



and implemented in wild capture fisheries. Early adopters of these techniques have already taken the right steps in their commercial operations, with electrical stunners seen in the Dutch flatfish fleet, the Norwegian cod fleet, the Alaskan cod fleet, and emergent in longline tuna fleets.

An effective stunning method followed by a killing method, or resulting in immediate loss of sensibility, should be applied immediately after capture. The most appropriate slaughter practice



CASE STUDY

Humane Harvest by Blue North

Humane Harvest was launched by the Alaska-based Blue North fishing company which recognises the close links between the humane-ness of catching methods for its Pacific Cod and the quality of the end product. Blue North uses traditional hook-and-line fishing to catch fish one at a time via a “moon pool” inside the centre of the boat. By allowing the crew access to the fish immediately as it breaks the surface of the water, the time of the landing and handling process is minimised. The moon pool method helps to safeguard the well-being of the crew as they are less exposed to weather and potentially falling into the water than on most fishing boats where the crew stand on deck.

Each fish is individually brought on board the boat directly from the water, through an entrance port to a semi-dry automatic stunning table. Once it has been electrically stunned it then proceeds immediately to a manual bleeding table.



CASE STUDY

Ekofish Group

The Dutch flatfish trawling company Ekofish has two boats with electrical stunners. After catching, fish are carried via a conveyer belt through an electric dry stunner which stuns them within one second. They are then hand-gutted and placed on ice.



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Fisheries are the last major food sector and last animal producing sector to be based on wild harvest.

depends on the fishing metier used and needs to be adapted for the targeted species. Training and experience of the fishers are essential for operating stunning equipment effectively and especially for carrying out manual stunning and killing procedures.

Recommendations on slaughter:

- Both in-water and out-of-water electrical stunning systems should be further implemented in wild capture and the technologies further adapted to more species and vessel types.
- Manual percussive stunning should be used more, especially in small-scale fisheries.
- After stunning, an effective killing method must be applied.
- With large fish, this will typically be the draining of blood (i.e. exsanguination) or the removal of its head (i.e. decapitation).
- With smaller fish, putting stunned fish quickly on ice will likely result in death before sensibility is recovered.
- Spiking the brain is an immediate killing method that should be used especially with larger fish.

1.2 After capture handling

Handling time is defined as the time from when a fish is under full control of the fisher to when it is killed or dies. Handling times can vary considerably across different fishing techniques, and the longer the fish is handled, the longer it suffers. Fishers should aim at keeping the handling time at a minimum and the handling as gentle as possible.

Recommendations for after capture handling:

- Pumping fish onboard should be used instead of braille nets and hauling trawls. Where pumping in water is not possible, the number of fish in the braille net should be limited to avoid crushing and injury, nets should preferably be fully lined to lift water with the fish and otherwise, the sides of the net should be lined to reduce injury by abrasion.
- Handling equipment and procedures should be organised to avoid throwing fish, moving fish with gaffs or picks, fish falling on the deck, fish getting caught on equipment, or fish being injured by equipment.
- Equipment coming into contact with fish should be kept moist.
- The use of gaff hooks should be minimised and avoided when possible, and must always be followed immediately by a slaughter procedure.
- No body part should be removed from a live animal eg. shark fin, swordfish bill, crab claw, and with the exception of the decapitation of stunned fish.
- Practices causing thermal shock to live, non-stunned fish should be eliminated.
- The monitoring and recording of capture injuries should be required at the time of processing.
- Live fish should be held in water.
- Fish species that are not used to captivity should not be held alive unless it can be demonstrated that their welfare needs are met by the holding systems.
- Fish held and/or transported alive after capture should be held, transported, and killed in line with regulations and best practices applicable in aquaculture.

2. DURING CAPTURE

Fishing Methods and their impact on fish

Every fishing method has by design a negative impact on fish and their welfare. However, the fishing sector has several opportunities to improve their capture techniques to minimise their impact on the fish. The below recommendations would be points of improvement that would go a long way in reshaping the wild capture fisheries methods.

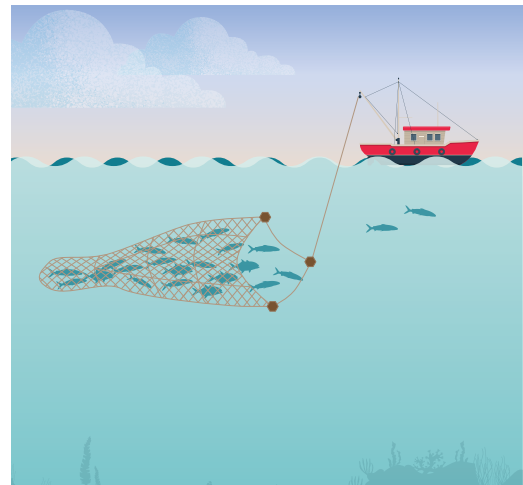
Recommendations common across capture techniques:

- Fishing levels and environmental management regimes should have the objective of reaching and maintaining the largest fish populations that 'optimal' environmental conditions can maintain.
- Bycatch should be further reduced and eliminated.
- Discarding fish with a poor chance of long-term survival should be eliminated and instead should be killed using best slaughter practices.
- The catch of larger sized and sexually mature fish should be preferred.
- The capture period should be minimised. This means minimising the tow duration during trawling and trolling, minimising the soak time for gill and trammel nets, minimising the deployment and drying up time of seine nets, and minimising the time between checking of pots.
- Training should increase the skills and knowledge of fishers on using fishing gears, and handling and slaughtering fish with full regard to fish welfare.
- Suffering and injury to the fish should be minimised. Metier, handling practices, and equipment should especially be designed and executed to this goal.
- Softer materials and knotless net construction should be preferred in all nets including trawl nets, gill and trammel nets, and braille nets.
- The capture depth should be minimised.
- The haul and ascent rate should be minimised.
- The tow speed should be minimised.
- Maximum target catch volumes per haul, in relation to gear capacity, should be established alongside a plan to reduce volumes if regularly over target.

Wild capture fisheries target a wide diversity of fish species in a range of different aquatic habitats. This has given rise to a great variety of fishing gear and capture methods. This section describes some of the most common commercial fishing gears and practices and examines the exposure of fish to potential welfare hazards.

2.1 Pelagic Trawl

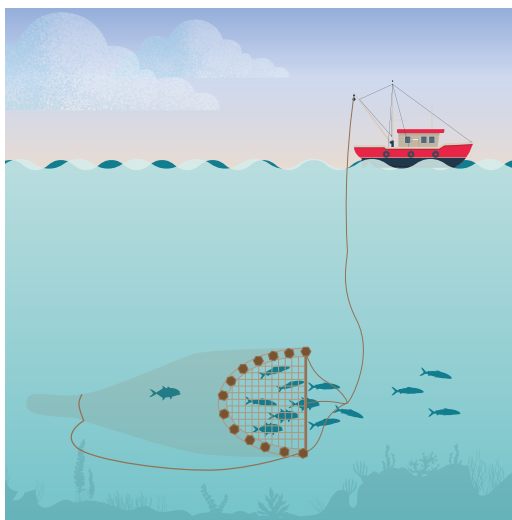
Description of Method	Impact on fish	Recommendations
<p>Trawl towed in mid-water to catch pelagic fish</p> <p>Net towed from bow or stern and tow times vary from a few minutes to a few hours depending on density of target species and size and power of vessel</p>	<p>Target species face exhaustion, injury, asphyxiation and crushing during towing and hauling, possibility of death during capture</p> <p>Decompression injuries and thermal shock associated with greater depths</p>	<p>Wings and cod end of trawl nets should be designed so as to reduce injuries.</p> <p>Pumping fish onboard should be used instead of hauling trawls.</p> <p>Catches so large that the net funnels are overwhelmed and selectivity does not work, and that compression in the cod-end is excessive, should be avoided.</p> <p>Towing speed should be minimised</p>



EU CATCH
25 - 40 BILLION FISH
20 BILLION
 EUROPEAN SPRAT

5-20 BILLION
 COMBINED OF OTHER SPECIES ESPECIALLY MACKEREL, HERRING, AND ANCHOVY

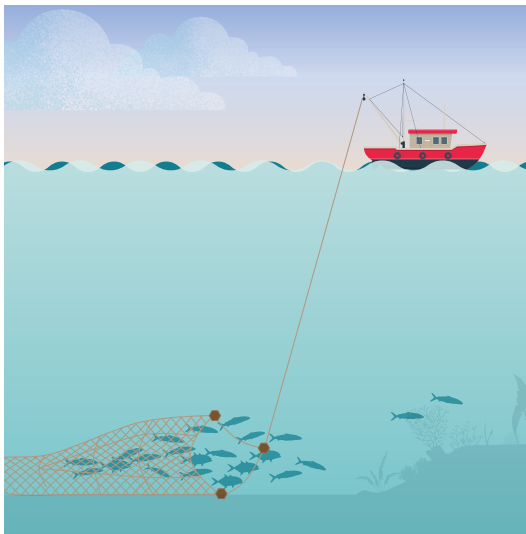
2.2 Beam Trawl



EU CATCH
47 - 50 MILLION FISH
46 MILLION
 PLAICE

Description of Method	Impact on fish	Recommendations
<p>Trawl towed on seabed, held open by a wooden or steel beam</p> <p>Beam towed behind vessel and tow times can vary from a few minutes to a few hours depending on density of target species and size and power of vessel</p>	<p>Target species face exhaustion, injury, asphyxiation and crushing during towing and hauling, possibility of death during capture</p> <p>Decompression injuries and thermal shock associated with greater depths</p> <p>Often large catches of non-target species</p> <p>Can have a significant impact on seabed fauna</p>	<p>Beam trawling should be forbidden</p>

2.3 Bottom Trawl



EU CATCH

7 - 9 BILLION FISH

6 BILLION

MORE SPRAT

0.5 - 2.5 BILLION

COMBINED OF PELAGIC SPECIES

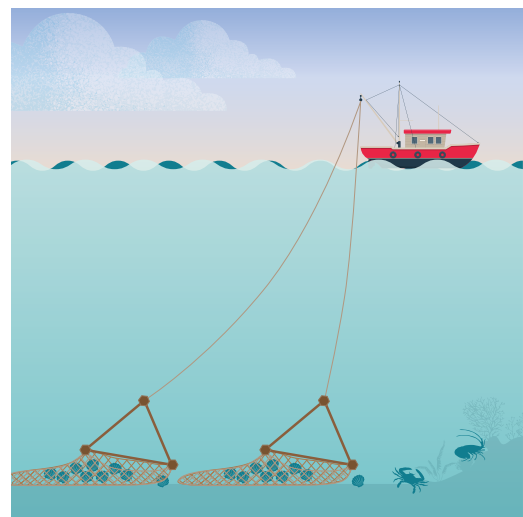
200 - 385 MILLION

DEMERSAL SPECIES
INCLUDING COD, HAKE
AND HADDOCK

Description of Method	Impact on fish	Recommendations
<p>Trawl towed on or near the seabed, held open by pair of trawl doors</p> <p>Usually much larger net than a beam trawl</p> <p>Net towed from bow or stern</p> <p>Tow times vary from a few minutes to a few hours depending on density of target species and size and power of vessel</p>	<p>Target species face exhaustion, injury, asphyxiation and crushing during towing and hauling, can come to the surface alive or dead</p> <p>Decompression injuries and thermal shock associated with greater depths</p> <p>Often large catches of non-target species</p> <p>Can have significant impact on seabed fauna</p>	<p>Bottom trawling should be forbidden</p>

2.4 Dredge

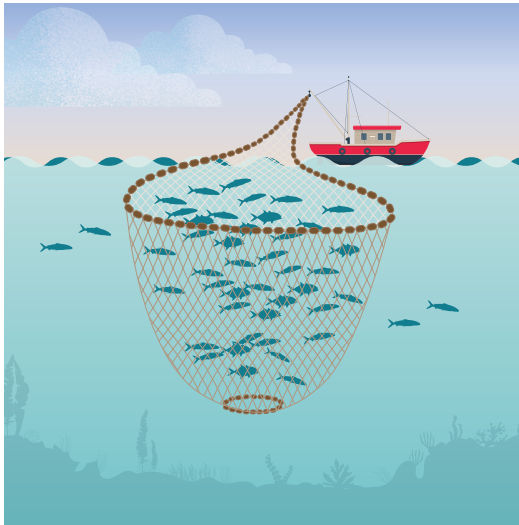
Description of Method	Impact on fish	Recommendations
<p>Rigid structure towed along seabed to target shellfish</p> <p>Consists of a frame and a toothed bar to dig scallops out of sand with a collecting bag behind it made of chain mesh and netting</p> <p>Dredges towed either side of vessel and can be single or up to 22 dredges per side – often long and areas are mechanically harvested</p>	<p>Target shellfish come to the surface alive as this is often a requirement for sale</p> <p>Non-target species may be injured or suffocated</p>	<p>Dredging should be forbidden</p>



EU CATCH

8 - 10 MILLION FISH

2.5 Seine Nets



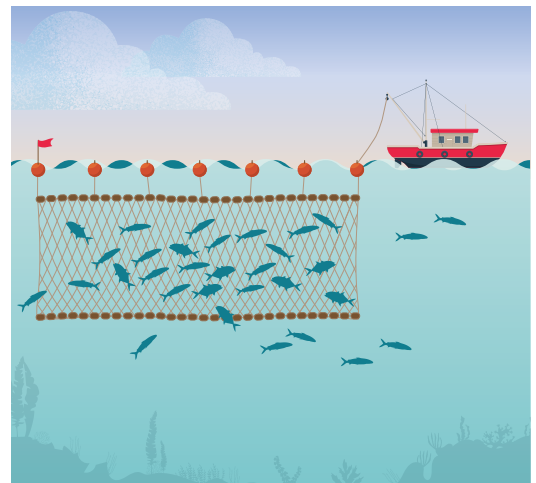
EU CATCH
3.5 - 16 BILLION FISH 1 - 2 BILLION
PILCHARD

2.5 - 10.5 BILLION UP TO 300 MILLION
ANCHOVY MACKEREL

Description of Method	Impact on fish	Recommendations
<p>A large net is used to surround a shoal of fish, the bottom of which is then drawn together to enclose them</p> <p>Headrope carrying numerous float is used to keep the net on the surface</p> <p>Net is equipped with rings along its lower edge where a cable is passed forming a bowl-like shape and preventing fish from escaping downwards</p> <p>Operation carried out directly from main vessel (the seiner) or from an additional smaller boat</p>	<p>Target species are crowded and then crushed when they are lifted onto the deck alive (where they subsequently suffocate or are flash frozen)</p> <p>Large species like tuna may also be gaffed (hooked in the flesh)</p> <p>Decompression and thermal shock associated with greater depths</p> <p>Maximal stress response should be avoided.</p>	<p>Fish should be crowded in steps and to the minimum density possible.</p> <p>Drying up time should be as short as possible.</p> <p>Pumping fish onboard should be used instead of braille nets.</p>

2.6 Drift and Set Nets

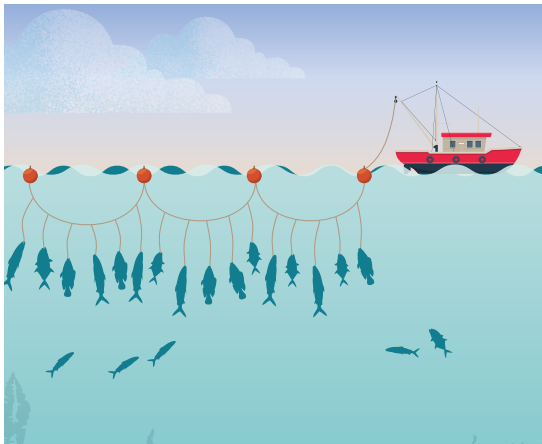
Description of Method	Impact on fish	Recommendations
<p>The net is suspended in the water, either hanging from buoys to drift on prevailing currents or fixed to anchored poles, usually just below the surface but can be anywhere between seabed and surface</p> <p>Nets are attached at one end to the boat that is fishing them or left to drift free to be recovered later</p> <p>Fish become entangled in mesh and the net caught behind their gills</p> <p>Soak time is generally a few hours</p>	<p>Suffocation, injury, exhaustion</p> <p>Easier prey to predators when caught in nets (i.e. deprecations)</p> <p>Decompression injuries and thermal shock associated with greater depths</p>	<p>Thicker twines should be used instead of fine twines and monofilaments</p>



EU CATCH
82 - 230 MILLION FISH 20 - 40 MILLION
PILCHARD

UP TO 100 MILLION 15 MILLION
MACKEREL EUROPEAN HAKE

2.7 Longline

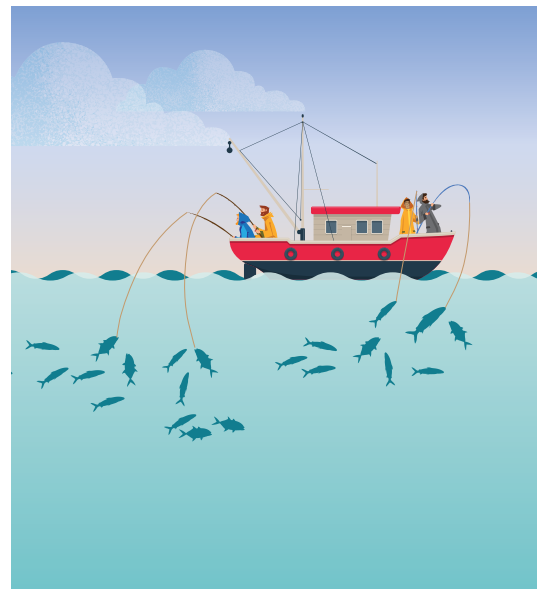


EU CATCH* 215 - 895 MILLION FISH	20 - 25 MILLION MACKEREL
150 - 750 MILLION ANCHOVY	11 MILLION HAKE

Description of Method	Impact on fish	Recommendations
<p>Can be left anchored or drifting with numerous baited hooks</p> <p>The main line is made of light rope or heavy nylon monofilament and may be many miles long</p> <p>Longlines target particular species and can minimise bycatch based on the time of year, the depth the line is set to, the soak time, the type and size of bait and the hook type</p>	<p>Injuries resulting from hook</p> <p>May swallow bait and remain hooked underwater for multiple hours or days</p> <p>Injuries from use of gaff hooks to bring fish onboard</p> <p>May swallow bait and remain hooked underwater for multiple hours or days</p>	<p>Barbless hooks should be used when possible.</p> <p>Circle hooks rather than J-style hooks should be used when possible.</p> <p>Live bait should not be used, including for chumming and for baiting hooks.</p> <p>Hook removal should be by hand and with the appropriate training.</p> <p>Hooks should not be torn from fish.</p>

2.8 Pole and Line

Description of Method	Impact on fish	Recommendations
<p>Single or multiple hooked rod and reel setups using live or dead bait or artificial lures and feathers</p> <p>Can also include trolling (towing baited lines behind a moving vessel)</p> <p>In handlining, trolling and jigging the fisher is in physical contact with the line and reacts when a fish bites the bait</p> <p>Fishing trips are usually during daytime hours only</p>	<p>Injuries resulting from hook</p> <p>May swallow the bait (deep hooking); being unhooked can result in damage to the gut and throat</p>	<p>Barbless hooks should be used when possible.</p> <p>Live bait is held in small containers until suddenly introduced to new water environment and a feeding frenzy</p> <p>Circle hooks rather than J-style hooks should be used when possible.</p> <p>Live bait should not be used, including for chumming and for baiting hooks.</p> <p>Hook removal should be by hand and with the appropriate training.</p> <p>Hooks should not be torn from fish.</p>



EU CATCH* 215 - 895 MILLION FISH	20 - 25 MILLION MACKEREL
150 - 750 MILLION ANCHOVY	11 MILLION HAKE

*This data concern both Longline and Pole & Line fishing methods



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A concerted effort is required from the fishery sector and from regulators to implement meaningful improvements.






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of the fish in EU wild
capture fisheries

2020

**EUROGROUP
FOR ANIMALS**

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