

# Wild Capture Fisheries: Best Practices for Aquatic Animal Welfare

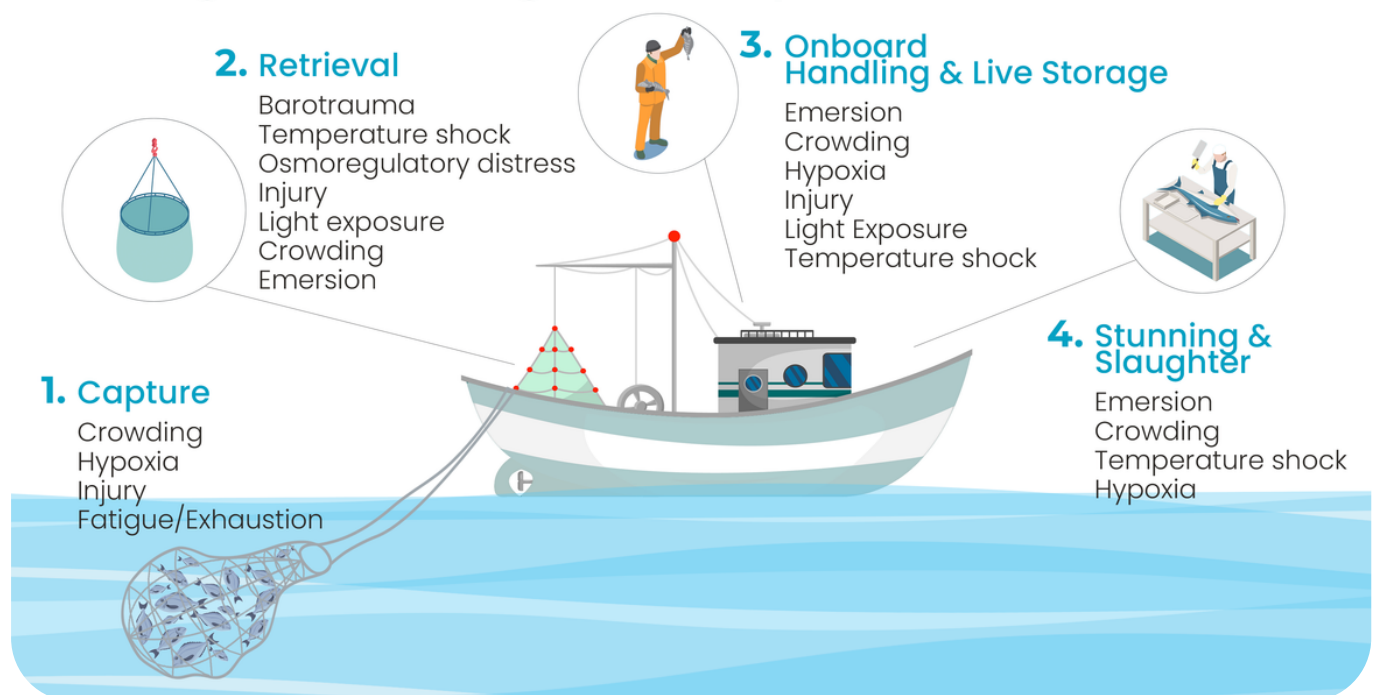


AQUATIC LIFE  
—INSTITUTE—

JUNE 2022

Animal welfare issues in commercial fisheries are widespread and significant. In fact, wild-caught seafood remains the last major food-producing sector that does not take animal welfare into consideration. However, gentler capture and slaughter methods which are likely to be more humane are already being practiced in select fisheries. We highlight examples of 'welfare-conscious' practices in commercial fisheries.

## Stages of suffering in wild capture fisheries



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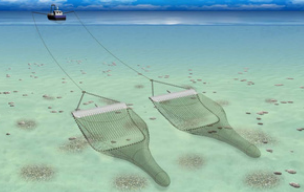
[www.ali.fish](http://www.ali.fish)



# Capture & Retrieval

- Gentle catching is key to good quality fish. This is why in large fishing nations such as Norway, a number of fishing vessels engage in gentler capture methods that also happen to be more humane.
- By limiting catch volumes through reduced fishing time and smaller nets, target animals are exposed to less stress during capture and have greater access to oxygen. For this reason, the Norwegian fishing producers' organization, Fiskebåt, recommends its members to limit the size of their catches for a higher quality end product.
- Moreover, simple modifications to gear can have a big impact. For example, the Norwegian Institute of Food, Fisheries and Aquaculture Research (Nofima) recommends the use of knotless netting in purse seines as it is less likely to injure the fish than traditional netting.

Examples of existing best practices in action:

Fishery	Gear	Techniques		Benefits
Pacific cod (Bristol Bay Seafood —Alaska)	Longline	Fish are: <ul style="list-style-type: none"> <li>• Individually hooked and retrieved within an hour.</li> <li>• Hauled one by one onto the vessel internally via a 'Moon Pool'.</li> </ul>	 <p>Photo: Blue North Vessel (Bristol Waves Seafood)</p>	<ul style="list-style-type: none"> <li>• Shorter fishing time reduces stress and injury to target species.</li> <li>• Reduced likelihood of catching non-target species.</li> <li>• A 'Moon Pool' improves crew safety through reduced exposure to the elements.</li> </ul>
Precision Seafood Harvesting (New Zealand)	Mid-water trawl	In place of traditional trawl nets, PSH use a large flexible PVC liner to catch fish underwater. Target fish are able to swim inside the liner whilst the correct size and species can be selected without air exposing the animals.	 <p>Photo: sanford.co.nz</p>	<ul style="list-style-type: none"> <li>• This design allows fishing vessels to target specific species/sizes leaves small fish and non-target animals to swim away unharmed through 'escape portals'.</li> <li>• Fish are able to swim inside the tubes.</li> </ul>
Western king prawn (Spencer Gulf King Prawns — Australia)	Demersal otter trawl	<ul style="list-style-type: none"> <li>• 'Hopper system' provides a wet well for animals caught in the codend where water is kept oxygenated.</li> <li>• 'Crab bags' inside the codend separate bycatch from catch.</li> <li>• Trawl duration is limited to 30-60 minutes.</li> </ul>	 <p>Photo: Spencer Gulf King Prawns</p>	<ul style="list-style-type: none"> <li>• Helps separate bycatch and improves prawn quality.</li> <li>• Protects prawn from damage.</li> <li>• Safe and quick process to return non-target animals to the ocean.</li> <li>• Short trawl durations minimise chances of injury, stress, and suffocation.</li> </ul>
Flatfish fisheries (UK)	Demersal beam trawl	The 'Sumwing' beam trialled by Seafish in the UK is an innovative wing-shaped substitute to the traditional cylindrical beam that creates airplane-like lift to 'fly' just above the seabed.	 <p>Image: seafish.org</p>	<ul style="list-style-type: none"> <li>• Fish caught using this method were found to be in markedly better condition than those caught using traditional trawls. Reported survival rates and fillet quality were both higher.</li> </ul>

**The 'Catch Monitoring Probe' developed by researchers at the Norwegian Institute for Marine Research gives fishing vessels insight on the crowding density of fish inside their nets as well as oxygen availability therefore allowing them to monitor the welfare of the fish before landing them.**

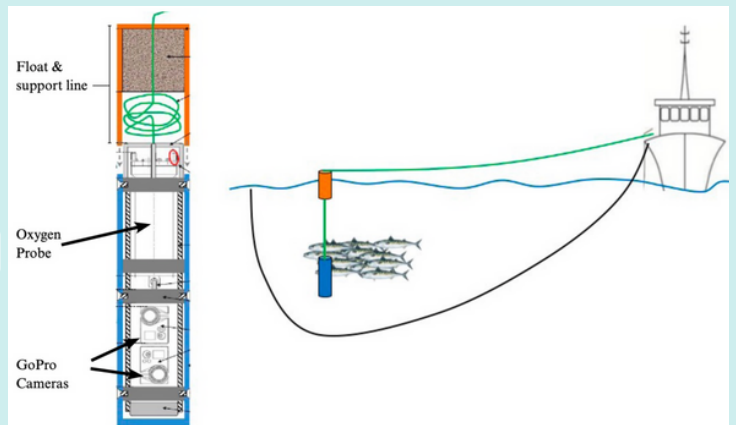


Figure 5.2.4. The catch monitoring probe deployed into a purse seine catch.

Image: Breen et al. "Behaviour & Welfare of Mackerel & Herring During Capture in Purse Seine"

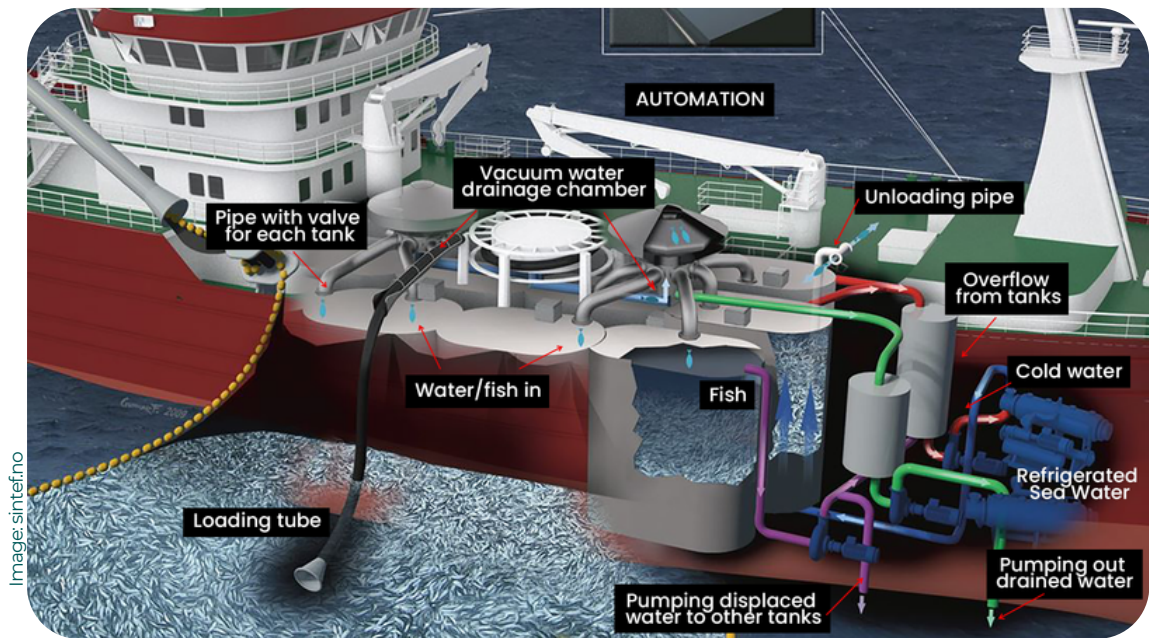


Image: sintefno

In the Northeast Atlantic, commercial purse seine fisheries for small pelagics such as mackerel commonly use a pumping system consisting of water-filled pipes to bring the catch onboard. This method limits the fishes' exposure to air and reduces the risk of dramatic temperature and pressure changes.

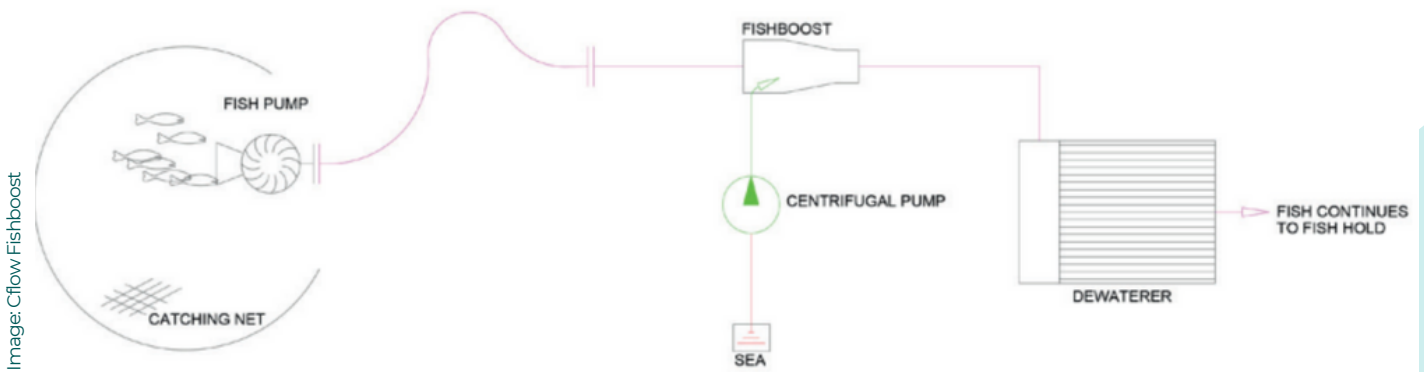


Image: Cflow Fishboost

FishBoost developed by Norwegian fish handling solutions supplier C-flow

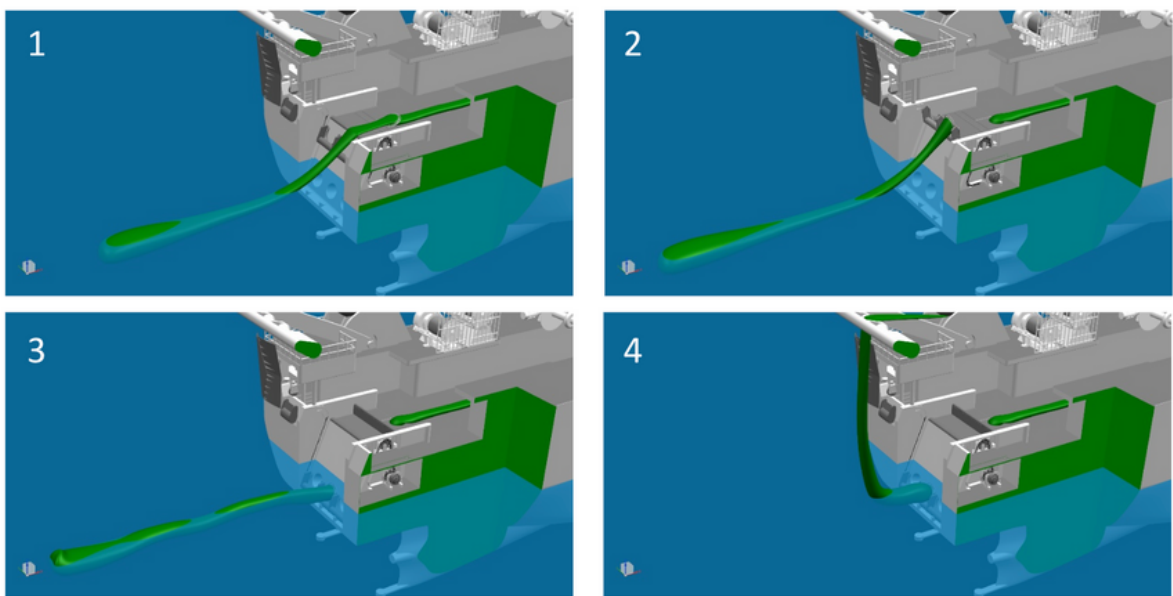


Image: ulstein.com



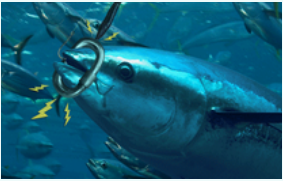
Shipbuilding company Ulstein has pioneered a new technique for bringing demersal species such as cod and haddock on board. This method of retrieval means fish are never air exposed nor handled.



# Stunning and Slaughter

Under European Union law, all animals killed for food must be stunned within a second before slaughter. However, this does not apply to wild-caught seafood. Technology exists to humanely slaughter a large proportion of wild-caught fish and this has already been implemented in a number of fisheries, examples of which are listed below. Further uptake of such technologies must be incentivized and promoted.

## Examples of existing best practices in action:

Fishing company/vessel	Details
<p>UK Fisheries-owned Kirkella</p>  <p>Photo: marinetraffic.com</p>	<p>The Kirkella is the first and only UK fishing vessel to use onboard electrical stunning provided by Optimar.</p>
<p>Ekofish Group (the Netherlands)</p>  <p>Photo: squarefield.com</p>	<p>Dutch fishing company Ekofish Group uses an electric pulse stunner onboard its vessels to immobilize fish before slaughter. Whether or not this method is humane is currently pending validation.</p>
<p>Efectos Navales del Atlántico (Spain)</p>  <p>Image: tunastunningmachine.com</p>	<p>Although this method is yet to be validated as humane, this stunning machine immobilises large pelagics caught by longline such as big eye tuna. This technology makes retrieval by fishers easier and safer and reduces stress in the fish thereby minimizing lactic acid accumulation. This results in a higher quality end product that can fetch higher prices.</p>

Researchers at the Norwegian Institute of Marine Research have developed a more humane method of slaughtering mackerel onboard fishing vessels using a combination of electrical stunning and chilling.



Photo: Anders et al. 2019 "Mackerel can be humanely slaughtered using electrical stunning and chilling"

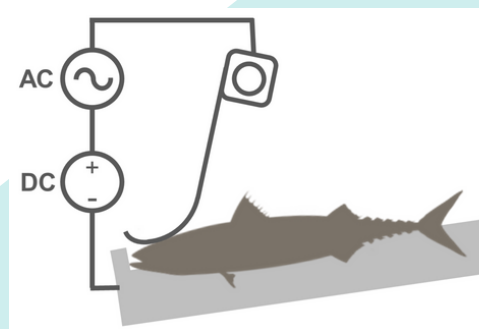


Image: journals.plos.org

### KRAV

Swedish organic certifier KRAV is possibly the only certifier to explicitly mention fish welfare in their fisheries standard. Their standard states that fishing vessels must do the following in order to be certified as 'organic':

- Empty nets and hooks with enough frequency so that fish are never left in the net or on the hook for more than 24 hours.
- [...] For vessels longer than 24 meters, you must have the means onboard to render the catch unconscious, for reasons of both fish welfare and quality.

# Signatories

Aquatic Life Institute  
Advocating Wild  
Africa Network for Animal Welfare USA  
Alianima  
Anima International  
ANIMAL  
Animal Advocacy Africa  
Animal Empathy Philippines  
Animal Equality  
Animal Friends Croatia  
Animal Friends Jogja  
Animal Justice Canada  
Animal Interfaith Alliance  
Animal Kingdom Foundation  
Animal Law Italia  
Animal Nepal  
Animal Rights Center Japan  
Animals Aotearoa  
Animals Australia  
Animals Now  
Apon Welfare  
ARAF-PLATEAU DOGON  
ARBA  
Arusha Society for the Protection of Animals  
Aware  
Catholic Concern for Animals  
Change For Animals Foundation  
Coalition of African Animal Welfare Organisations  
Compassion in World Farming  
Conservative Animal Welfare Foundation  
Crustacean compassion  
The Dark Hobby  
Dharma Voices for Animals  
Dieren Bescherming  
Djurens Rätt  
Dyrenes Alliance  
Education for African Animals Welfare  
Essere Animal  
Factory Farming Awareness Coalition  
Feedback Global  
Fish Welfare Initiative  
F.R.E.E  
Fórum Animal  
Friends of Phillip  
Ghana Animal Welfare Society  
Greek Animal Welfare Fund  
Humane Africa Trust  
The Humane Global Network  
The Humane League  
Humánný pokrok  
Institute of Animal Law Asia  
Invisible Animals (Nevidimi Zhivotni)  
Kafessiz Türkiye  
L214  
Lady Freethinker  
National Council of SPCAs  
Nurture Imvelo Trust  
NY4Whales  
Oikeutta eläimille  
One Voice  
ONG Sante Animale Afrique (SAA)  
Plataforma ALTO  
Planet For All  
Protección Animal Ecuador (PAE)  
Proyecto ALA  
PAZ  
RENCTAS  
SAFCEI  
SAFE  
Samayu  
Sea First  
Sentient Media  
Sharklife Conservation  
Shellfish Network  
Shrimp Welfare Project  
Sibanye Animal Welfare and Conservancy Trust  
Sinergia Animal  
Sống Thuần Chay  
SPCA Montreal  
SPCA New Zealand  
SPCA Selangor  
Tanzania Animal Welfare Society (TAWESO)  
The Dorsal Effect  
The Oceans Need Us  
Tikobane Trust  
Tourists Against Trophy Hunting  
University of Guilan  
Utunzi Animal Welfare Organization  
Vegetarianos Hoy  
Vissenbescherming  
Voiceless  
Voices for Animals  
Voters for animals rights  
We Animals  
Welfarm  
West Africa Centre for the Protection of  
Animal Welfare (WACPAW)  
World Cetacean Alliance  
WTS