



They experience stress, fear and pain

Third updated version

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*The welfare
of fish is a
forgotten issue
in fisheries
policy*



Introduction

In terms of concern for their well-being, fish are still a neglected group of animals, and a very large group at that. It is estimated that more than one trillion fish are removed from their natural habitat by fishers every year. The way in which this is done causes these animals much stress, fear and pain. Stichting Vissenbescherming (Foundation for the Protection of Fish) considers the large scale marine fishery as the greatest affront to the well-being of vertebrates that exists, together with the suffering of fish in aquaculture.

Luckily fish welfare is receiving increasingly more attention. Eurogroup for Animals made improvement of fish welfare one of their twelve strategic goals for the period of 2015 till 2020. Apart from animal protection groups, many scientists now see how serious the problem is in regard to fish welfare and that is a major step forward. A good example was in 2011 in Madrid the International Workshop on Fish Welfare, where many scientists presented their work and findings.

However, in the world of fisheries and fishery policy little has changed. The fishery sector worldwide still uses cruel catch and killing methods, while in aquaculture the enormous lack of knowledge on how to keep fish under good conditions still prevails.

Even though the scale of cruelty to fish suffering is immense and progress in improving conditions for fish is extremely slow, we are not discouraged. As protectors of animals we will continue to raise awareness about what people do to these neglected animals. And fortunately we now see the first companies in this sector who acknowledge the enormous fish welfare problem and try to change their fishing methods.

Apart from the fisheries there is that remarkable hobby of angling, in which people inflict a lot of suffering on fish for recreational purposes.

In this booklet, we first briefly describe the lack of understanding of fish welfare in marine fisheries and what can be done to improve this situation. After that we describe the welfare problems in aquaculture and the certification schemes for fish.

And comments are of course always welcome.
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Paul Denekamp, Amsterdam, October 2014.

Cruelty to wild-caught fish

a. fish are sentient beings

In 2009 the European Commission 'acknowledged that there is now sufficient scientific evidence indicating that fish are sentient beings and they are subject to pain and suffering when they are killed.' Fish are entirely capable of experiencing pain, stress and fear. The prominent scientist, Victoria Braithwaite, provides plenty of evidence in her book from 2010 *Do fish feel pain?* for this proposition.

b. methods of catch

The British organisation Fishcount made the welfare problems for fish caused by catch methods clear in its report *Worse things happen at sea: the welfare of wild-caught fish* (2010) which states 'These fish are crushed and buried alive under masses of others in trawl nets, impaled on hooks as live bait and snared by the gills in gill nets.' *Worse things happen at sea* is the first inventory of catch methods and gives a shocking picture of the effect of these on fish welfare.

There are many methods of catching fish, but almost all of them cause the fish extreme suffering. Just a few examples include the following. Once caught in the enormous nets of the pelagic fisheries, fish are often dragged vast distances through the water. As the nets are reeled in, they are pressed together at the bottom causing both internal and external damage. On top of this, just like humans, fish suffer great pain and damage to internal organs from the difference in pressure between deep water and the surface. Even in the much smaller nets of bottom trawlers fish are not spared. Also in these nets fish are crushed or damaged by being pressed.

Even more than with the pelagic fisheries, the fish that get caught on the hundreds of hooks on a longline are dragged great distances, sometimes more than one hundred kilometres. Furthermore, live fish is often used as bait in longlining. Fish caught in gill nets remain trapped in the net for hours and sometimes even days, unable to eat or defend themselves against predators taking bites out of them. They can stay alive for a long time, suffering pain, stress and fear.

Of the current catch methods, some are especially cruel and should be banned or adapted. So the use of fish as live bait for pole fishing and longlines must be forbidden with immediate effect. Equally, all fish caught with longlines and gill nets must be removed from the line or net within a limited number of minutes.

Cruel catch methods have been practiced for centuries and until recently hardly any research has been done into developing catch methods that are less harmful to fish. The recent developments to catch methods have focused mainly on reducing bycatch because of the obligations of the new European Fisheries Policy. While minimizing bycatch is commendable in itself because of reducing the suffering of fish, we would like to see as soon as possible the development of new catch methods that dramatically reduce the harm to fish. Given our lack of knowledge of possible alternatives and the amount of research that still needs to be done speed is of great importance. Options for more humane catch methods include the use of pumps, which hopefully will help to reduce the suffering of fish.

c. how fish die and killing methods

Most of the fish that are still alive when the nets are hauled up suffer immensely. They suffocate when taken out of water and into the air. For a fish, this is comparable to humans being dragged from air into water. The death struggle of the suffocating fish is terrible and, depending on the species, takes from minutes to hours.

Many fish are stripped on board – their intestines removed – while still alive. Fish with their well developed sensory system will feel the pain, stress and fear as a consequence of this cruel treatment.

Most fish are not actively killed by fishers, but die a slow death. A lot of fish is put on ice or in ice water, but fish can stay conscious a long time in those circumstances.

Fish should be killed or stunned by fishers immediately after landing. Legislation is in place to make the slaughtering of terrestrial animals as humane as possible, and we believe that this should be extended to both wild and farmed fish. It would reduce a lot of unnecessary suffering.

In the Netherlands a method has been developed for the aquaculture to stun fish electrically. The fisheries company Ekofish and the Dutch research institute have developed out of this a new methods of stunning flatfish on fishing vessels and after some last tests hopefully this method will be in full use in the beginning of 2015. After stunning the flatfish has to be killed, otherwise they regain consciousness. This stunning method has to be adapted for other fish species, but we believe that, at least in the European Union, most commercially caught species of fish could be stunned and killed with this stunning method within ten years from now.

The Vissenbescherming thinks that given the number of animals caught and

killed and way this happens, the fisheries must currently even be considered as the cruelest industry to animals in the world. This must change as soon as possible.

d. the European fisheries policy

The European Union has decided on a new common fisheries policy in 2014. This policy concentrates on the enormous problems of overfishing and discards and ignores the cruelty meted out to fish by catch methods and the manner in which the fish die. There is only one sentence in the Regulation (page 6) about the welfare of fish: 'The Common Fisheries Policy should pay full regard, where relevant, to animal health, animal welfare, food and food safety.'

In the next few years this 'full regard to animal welfare' must be taken seriously and because of that the European Union has to stimulate the use of fast stunning and killing methods on all member countries' fishing vessels. Also the necessary research has to start as soon as possible for the development of more humane catch methods for fish. Moreover the European Union should ban the cruelest catch methods such as the use of live fish for bait and takes measures to change other catch methods that harm fish a lot.

It's important that the new European Maritime and Fisheries Fund (EMFF), that finances new developments in the fisheries, also covers the development of better catch and killing methods. Fortunately the European Parliament accepted an amendment on the proposal for the EMFF, which adds a criterion 'reducing the negative impact of fishing on animal welfare'. This amendment opens up the possibility of funding for research into animal welfare in the fishing industry. A lot of political pressure in the next few years will be necessary to realize these proposals.

Reflections on fish farming

Stichting Vissenbescherming does not endorse fish farming (aquaculture also includes farming of other marine animals). From the perspective of animal welfare, it is difficult for consumers to choose between wild fish or farmed fish. On the one hand, the methods for catching and killing wild fish are inhumane. Fish are pressed together in huge nets and dragged over long distances. Once on board, they often take a long time to die, and many are stripped alive. The other side of the argument is that these fish enjoyed a life of relative freedom before meeting their painful end.

In the case of farmed fish, most killing methods are equally bad. An effective method to stun catfish and eel before slaughter was developed in the Netherlands some years ago. In this 'StunFishFirst' method, the fish receive an electric shock which stuns them and afterwards they are killed. This method has still to be adapted for a lot of other fish species, but unfortunately little investments are made to do this. Until then most fish will continue to die on ice, in which they remain conscious for a long time. The Human Slaughter Association declares death on ice, or live chilling, for fish as unacceptable.

But it are not only the killing methods that are bad in fish farming. There are several other important animal welfare issues in fish farming. The most important of these are listed below.

1. The captive fish are often originally wild fish that have been caught and are kept captive for fattening. This is for example common practice for tuna. Stichting Vissenbescherming believes that it is wrong to keep wild animals captive, given the infringement on their freedom.

2. Some fish species cannot breed in captivity. In the case of eel, for example, young wild eel are caught and kept captive. The fact that eel do not breed in fish farms tells us that there is a negative link between their captivity and their well-being. This in turn implies that they should not be farmed in the first place. Furthermore, given the radically declining population of eel worldwide, removing eel from the wild is risking the survival of the species.

3. Many commercial fish species, predominantly carnivorous species, feed on fish themselves. They are fed on the catch of large scale fisheries, thus stimulating these fisheries with their bad score on welfare. While the trend is to reduce the amount of fishmeal in farmed fish food, this has only been partly successful to date.

4. An important question is whether the well-being of carnivorous fish is affected if they are unable to display their normal behaviours as predators and are not fed fish. This is not an issue in the case of herbivorous fish such as carp or tilapia, which are fed plant-based foods. In the case of carnivorous fish, such as catfish or salmon, it is difficult to assess how a plant-based diet affects their health and well-being.

5. Fish in fisheries must be able to develop and practice their natural behaviours. Their welfare is affected if they are unable to do so. We also believe that it is

important for kept fish to have challenges and opportunities to play. If we draw a parallel to chicken or pig farming, then is generally accepted that animal-friendly forms of farming allow the animals to practice their natural behaviours. We know very little in this regard about most farmed fish species. Much more scientific research is thus needed on the natural behaviour of these species. We do know that keeping some species of flatfish in multi-level tanks seems to enable them to express their natural behaviour in that they can establish a hierarchy amongst themselves. However, there is not much more knowledge and this is only the tip of the iceberg in what we need to discover. An important question is for example what are the possibilities are for enrichment of the tanks where the fish are kept.

6. Density is an important factor in fish welfare. In some species, a low density of fish leads to territorial behaviour and aggression towards other fish. While the density increases as fish grow, we currently do not know the effects of high density on territorial behaviour and thus on the welfare of the fish. Far more research is needed in order to be able to establish the desirable densities of fish in tanks.

7. In general, many improvements can be made in keeping fish. The underwater environment and water quality, for instance, are essential for the welfare of fish. The way in which food is offered is also of vital importance. Simply ensuring that all fish have access to sufficient food is in itself a welfare issue.

8. Whenever possible, handling of fish should be avoided. Fish are handled for reproduction methods like obtaining sperm (milt) and for the administration of medication and hormones.

9. The use of genetic modification (GM) and certain biotechnology methods such as gender manipulation, have major negative effects on the welfare of fish and should be banned.

10. Live transportation of fish, for instance to their place of slaughter, causes stress and injuries to the fish. Transport affects their welfare in a negative way and should be limited. When fish is slaughtered that should happen as much as possible at the place where the fish is kept.

11. Food deprivation before killing or transport has major bad consequences on fishes' well-being. The fish are trained to be fed at a certain time of the day and become frustrated when this expectation is not fulfilled. Food deprivation should be limited to a maximum of two days.

12. In general, new fish species are farmed while there is insufficient knowledge about the needs of the animals. Little is known about the food they need or the diseases that they may be susceptible to. Much experimentation is being performed at the expense of fish.

Because of these thirteen most important shortcomings in fish farming Stichting Vissenbescherming concludes that the life of a fish in a fish farm is even worse than that of a wild fish that, despite a slow and painful death, has lived a fairly free life. In terms of animal welfare, fish farmers could do much to improve the conditions for their fish. However, it is debatable if the conditions for farmed fish will ever approximate, let alone exceed, those of wild fish.

The aquaculture sector in Europe believes that it is doing well in terms of fish welfare. The Future of European Aquaculture. Our vision: A Strategic Agenda for Research & Innovation (2012) states: 'The extremely high standards of fish health and welfare observed in European aquaculture are a credit to the different production sectors and indicative of the investment made in the fish health and welfare research and sectoral education.' Anyone considering the thirteen points above and the number of farmed fish that die on ice knows that this is simply not true. The industry itself uses the term 'sustainable' with ease. But sustainability must include animal welfare, and given the violations of animal welfare in this sector, no fish farm can claim to be sustainable.

That said, there are important developments in some parts of the fish farming sector where, unlike in wild fisheries, there is the intention, albeit at the early stage, to develop more animal friendly methods of keeping and killing fish. As entrepreneurs they don't want to be automatically identified with factory farming. They don't want to market bulk production, but to offer quality fish. Some of them have expressed the need to include animal welfare as part of their quality aspirations. Some Scottish salmon farmers have even been awarded the Freedom Food certificate from the Royal Society for the Prevention of Cruelty to Animals, although from Stichting Vissenbescherming's perspective these farmers are not yet fish-friendly enough to deserve the certificate. Some fish farmers aspire to organic quality certification for their products, but in fact animal welfare is not a criterion in certification.

Stichting Vissenbescherming, in close cooperation in the Netherlands with the Dierenbescherming (Dutch Society for the Protection of Animals) and the Sea First Foundation and in Europe with Eurogroup for Animals, is continuing its struggle for improving animal welfare in the fish farming industry as soon as

possible. We continue to work on the animal welfare issue by convincing farmers to improve their fish farming methods with immediate effect, and by addressing consumers, shops, non-governmental organisations and politicians. The ways in which fish are currently being treated in fish farming must not continue.

Certification for fish

Certification for fish products have existed for a number of years. The best known is the Marine Stewardship Council's MSC label. This label declares that the fish has been caught in a sustainable manner. The criterion for this is that the fishery is managed so that fish are only caught from healthy stocks and in a responsible way that does not contribute to overfishing. However, it does not take either animal welfare or the way in which the fish are caught and killed into account. Stichting Vissenbescherming views animal welfare as a part of sustainability, and as this aspect is not taken into account by the MSC label, we consequently do not believe that MSC supports sustainable fishing.

Recently a certification system has also been developed for aquaculture. The Aquaculture Stewardship Council states that it 'manages standards for responsible aquaculture' and awards fish farms the ASC certification. The criteria for certification are that farms 'minimise the environmental and social footprint of commercial aquaculture'. Unfortunately, the ASC certification too does not include animal welfare in its criteria. It does not require humane stunning and killing methods, and neither does it include the other animal welfare issues mentioned throughout this document. Again, Stichting Vissenbescherming believes that as the ASC certification does not take animal welfare issues into account, it is not a mark of sustainability.

Stichting Vissenbescherming's conclusion is that there is currently no appropriate 'sustainable fish' certification scheme for either caught or farmed fish as no certification scheme includes animal welfare aspects.

Stichting Vissenbescherming

(Foundation for the Protection of Fish)

Fishes and other aquatic animals are often victims of the way humans want to use them. Especially that happens in the fisheries, who catch annually more than a trillion fish. Since 2000 the Dutch organization Stichting Vissenbescherming puts the cruel treatment of fish and other marine animals in fisheries, aquaculture, aquariums and angling on the political agenda and tries to find solutions to mitigate the situation. We provide scientific based information about fish and their awareness, behaviour and ability to feel pain and stimulate scientific research on these topics, because we still lack a lot of knowledge.

The Vissenbescherming recently became a member of Eurogroup for Animals and hopes that with the new Eurogroup working group on Fish Welfare and fish welfare as strategic goal of Eurogroup nr. 10 important steps can be made now to more welfare for this very big group of animals.

Stichting Vissenbescherming works in the Netherlands closely with the Dierenbescherming (Dutch Society for the Protection of Animals) and the Sea First Foundation in its mission to improve the well-being of fish and hopes to collaborate in the future with a lot of European organizations on this issue.

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