

Reports and Comments

Worse things happen at sea: the welfare of wild-caught fish

Ask most people with an interest which animal's welfare merits the most attention, the answer is likely to be the chicken, because of the number farmed each year. This report by Alison Mood of FishCount makes a compelling argument that it is fish we should be more concerned about. The report, which details the welfare of fish in commercial fishing, makes for grim reading as the author gives statistic after statistic that highlights the extent of the problem, not least of which is the sheer number of individual fish affected.

Although the amount of fish caught annually is only reported in tonnage, the report has tried to estimate likely numbers based on mean weights of the fish species caught and their length. The number calculated is staggering and dwarfs that of all farmed animals. Compared to the 3 billion mammals and 57 billion birds reported by the Food and Agriculture Organisations (FAO) of the United Nations as farmed in 2008, FishCount estimated that between 970,000,000,000 and 2,740,000,000,000 (ie 0.97–2.74 trillion) individual fish are caught each year, with a conservative best estimate in the order of a trillion fish! (Those interested in how this number was arrived at are advised to read the separate document at the FishCount website which details the assumptions made). Further, the report points out that these figures take no consideration of fish caught illegally, or as bycatch or caught and used as feed for others.

As one attempts to grasp the scale of individuals affected, the report moves on to detail the different methods by which fish are commonly caught and the welfare challenges and insults of each. Trawling, purse seining, gill, tangle and trammel nets, rod and line and hand-line fishing, trolling, pole and line and long-line fishing, trapping and harpooning are all covered in this section. Of all these, it is trawling — and shrimp trawling in particular — that comes out as the most problematic; those in which capture and landing are swift and where the fish is most likely to be landed alive, such as rod and line, as the most humane.

According to the report, fish caught by trawling suffer many insults; fish caught in trawl nets are funnelled back towards a narrow closed end — the 'cod end' — where they are trapped. As a trawl continues and further fish are caught, those in the cod end are increasingly forced together and suffer skin and scale damage, from contact with other fish and the net itself, and crushing. Average figures of 29% of fish dying before landing in a 2-hour trawl and 61% in a 4-hour trawl are given. Deep-caught fish with swim bladders further suffer during the landing process as, as they are raised to the surface, changes in pressure cause parts of the gut to be forced out of the mouth and anus, eyes to bulge and swim bladders to burst.

For the survivors, death does not come quickly. In common with most of the other methods of fishing, most fish landed are left to suffocate in air, despite the fact that they are conscious. The report quotes studies that have shown that the time for fish to become insensible is between 55–250 minutes. Indeed, this time may be even longer if the fish are chilled on landing as the process of chilling slows metabolic rate, in addition to the additional distress it causes. For those methods of fishing which target larger fish, such as line fishing, gutting is more common and time to insensibility quicker — between 25–65 minutes. It should be pointed out, however, that such gutting commonly occurs whilst the fish is conscious, ie without stunning. As the report states, such methods of killing 'would fail any standard of humane slaughter' and would be unthinkable as commercial practice for animals such as cows or pigs.

There is much more of note in the report. Issues to do with the lack of selectivity of some of the methods of fishing and survival rates in this non-targetted 'bycatch' are discussed. Bycatch levels can be high: 40–60% of fish caught by trawlers in the mixed fishery of the North Sea, and the FAO estimates that 8% of the recorded landed global catch is discarded. This is of concern because whilst the assumption has been that discarded individuals usually survive, studies have shown that the death rate may be much higher — a rate of 77–100% is mentioned with regard to an observed herring trawl.

In the later sections of the report, the author moves from highlighting the concerns to suggesting ways by which these can be alleviated. Most simply, the report calls for a reduction in the number of fish caught. It gives several examples of how this could be achieved, eg by adopting more selective methods of fishing that reduce bycatch and through greater control of illegal fishing. As it states, because the numbers involved are so great, even a small reduction in fishing of 0.1% would mean 1 billion fewer deaths. Another measure highlighted is to increase the size fish are allowed to grow before being caught, as this would mean fewer fish would need to be caught to produce the same yield. A fourth is to reduce the numbers of fish caught not directly for food, but which are used, for example, to feed other fish. Such 'fishmeal' makes up between a quarter and a third of total annual recorded fish tonnage, and because of their small number, a much larger proportion of the individual fish caught (NB To produce 1 kg of farmed salmon, 3–4 kg of wild fish have to be caught).

Refinements to reduce fish suffering are also detailed; through the speeding up of the capture process, the modification to fishing gear and handling, the adoption of methods for humane slaughter, through avoiding the use of live-bait fish and purpose-killed bait fish, and the choice of more humane capture methods, eg not fishing below 20 m for fish with swim bladders. Such modifications, the report argues, could be sold to the fisherman and the

consumer under the banner of ‘higher quality’ as fish which are captured and dispatched swiftly and more humanely produce a better quality flesh.

It finishes by calling on animal welfare and environmental groups to become more involved in raising awareness of the welfare issues concerning fishing and lobbying retailers, fisheries and governments to develop and adopt more humane and sustainable practice.

This important report is not without fault however. It is at its weakest when dealing with the issue of fish sentience. Here, the author lays out some of the evidence in support of the fish’s ability to feel pain and suffer. Too much of what is cited here comes from secondary rather than primary sources, and is dated. For example, an RSPCA report from the early 1980s is cited as evidence that fish feel pain, as are the BBC news website and a report from a UK national newspaper, the *Daily Mail*; this despite the fact that there is more up-to-date research on the issue. Nonetheless, few would argue that fish don’t at least deserve the benefit of doubt on these matters. More problematic is when the author addresses the issue of fish feeling fear and panic as the supporting evidence is somewhat superficial. Certainly its brevity distracts from the otherwise persuasive arguments and evidence offered elsewhere in the report.

It is to be hoped that this report marks an important turning point in our use of fish — a sea change in our attitude towards them if you will — and that all those involved in their capture and harvesting take note of it. As it points out, at present, the sentience of fish is little acknowledged by the commercial fishing industry; similarly the concept of fish suffering is not covered by existing codes of practice, including the laudable Marine Stewardship Council standards for well-managed fisheries. This report, one trusts, should help to change this.

Worse Things Happen at Sea: Report on the Welfare of Wild-Caught Fish (August 2010). A4, 139 pages. By Alison Mood, fishcount.org.uk. Available to be downloaded from: <http://fishcount.org.uk>

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Good Practice Guide for animals used in scientific purposes

The aim of this Guide is to promote the humane and responsible use of animals for scientific purposes and to encourage the highest standard of husbandry and animal care. It encompasses all aspects of the care and use of animals in medicine, biology, agriculture, veterinary and other animal sciences, industry and teaching. Split into 8 sections, covering the acquisition of animals, facilities, responsibilities of investigators and teachers amongst others, it is well written and clear and incorporates the latest thinking and recommendations on animal use. Grounded in the principle that animals should always be given the benefit of any doubt concerning pain relief, and with a specific appendix

that addresses the pain, this guide can perhaps be regarded as a model for others looking for guidance on this subject or seeking to draft their own guide.

Good Practice Guide for the Use of Animals in Research, Testing and Teaching (2010). A4, 40 pages. National Animal Ethics Advisory Committee, MAF Biosecurity New Zealand. Copies of these documents can be obtained from: The Secretary, National Animal Ethics Advisory Committee, PO Box 2526, Wellington 6140 New Zealand. It is also available for download from: <http://www.biosecurity.govt.nz/files/regs/animal-welfare/pubs/naeac/guide-for-animals-use.pdf>

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New Zealand Code of Welfare for dogs

For those of us concerned about companion animal welfare, this Code of Welfare for dogs from the New Zealand Government will be of interest. Following, as it does, the recently published England, Wales and Scotland Codes, it provides an opportunity to compare the issues of concern between these countries and look at how they have been addressed.

Under New Zealand legislation, any individual or organisation can draft a code of welfare, and this one was drawn up by a group convened by the New Zealand Companion Animal Council, which included representatives from the Royal New Zealand Society for the Protection of Animals, New Zealand Veterinary Association and Vet Nurses Association, Federated Farmers of New Zealand, Companion Animal Society, Unitec, New Zealand Kennel Club and the Institute of Animal Control Officers.

The Code is split into 10 sections and details 21 minimum standards that New Zealand dog owners must meet. In addition, each section and sub-section of the Code thereof, contains an introduction to the area of concern and further outlines recommended best practice and other general information deemed relevant.

Amongst the minimum standards are those that address expected issues such as food and feeding, access to water, euthanasia and ill-health and injury. Other standards are more specific and cover concerns that include debarking, removal of dew claws and aids for behavioural modification; as such these may be less anticipated but perhaps no less welcome.

In drawing up this Code, the group have also been able to incorporate some of the recommendations that recent reports, such as the UK’s Bateson Inquiry (see Reports and Comments, *Animal Welfare* 19[ii]) have made regarding the better safeguarding and regulation of the genetic health of dogs. The Code therefore requires that:

- ‘Breeders must make all reasonable efforts to ensure that the genetic make-up of both sire and dam will not result in an increase in the frequency or severity of known inherited disorders.’ (Minimum standard No7 — Breeding); and
- ‘.....(b) People supplying puppies must, at the time of supply, disclose to persons receiving them, any known