The Old School, Brewhouse Hill, Wheathampstead,
Hertfordshire AL4 8AN, UK
www.ufaw.org.uk

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Potential directions for the IWC to address the conservation and welfare challenges faced by cetacean species

SR Harrop

Durrell Institute of Conservation and Ecology, School of Anthropology and Conservation, University of Kent, Kent CT2 7NR, UK
Email: S.R.Harrop@kent.ac.uk

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The relationship between conservation and welfare

The gulf between ethical propositions of animal welfare and the scientific basis of wildlife conservation has, at times, impeded a practical working relationship between the two (Harrop 2003). Indeed, quite often the two disciplines are capable of looking in different directions. The conservationist fixes on the species and its population status whilst the welfarist focuses on any animal, regardless of its conservation status, that is phylogenetically sophisticated enough to be capable of suffering. In consequence, welfare components are rare in international wildlife management law and are restricted to being subordinate to conservation objects (Harrop 1997, 2010). Nevertheless, the two disciplines are moving closer in many ways with the development of scientific indicators of welfare and also the need to refine the principal drivers of conservation strategies which must ultimately derive from an ethical objective. In this connection, the recent review of the CBD's strategy at Nagoya founded its new targets on a vision of 'Living in Harmony With Nature' (Harrop 2011c). Such an achievement would probably be a first for humanity and an utterly impractical aspiration. However, I would like to construe this vision, with the freedom of poetic licence, as conceiving both a materially and ethically harmonious future for humans and animals.

Predictions concerning the combined effect of climate change and biodiversity decline describe a shrinking of the 'wild' and the reduction of natural habitats (Pritchard *et al* 2011). The necessary conservation responses to this may force more species into controlled conditions and increase the need for conservation interventions that impact on the welfare of animals (Harrop 2011a). In these circumstances, the need to inject compassion into conservation law and policy becomes much greater. It may be, therefore, that the ideal trajectory for conservation and welfare legislation, in the context of predicted climate changes, is to proceed to a more comprehensive, integrated and sophisticated international regulatory regime setting out animal welfare standards to support future conservation strategies.

The provisions that reflect wild animal welfare in international law, to date, largely restrict their welfare prescriptions to animals wholly under human control. However, beyond some incidental provisions in the Berne convention that apply to the geographical region of Europe, only the IWC, as an international regulatory institution, applies welfare regulation to free-living wild animals (Harrop 1997, 2003).

The manner in which animal welfare law has been integrated into international instruments, to date, is not unique but instead reflects the manner in which animal welfare legislation has developed elsewhere. In the UK, by example, wild animal welfare regulation only came into being 100 years after the early laws extending welfare to domestic and farm animals. This route of development is not surprising. It was traditionally far more difficult to avoid a painful death when killing a wild animal than a constrained domestic animal and hence some social and thus regulatory reluctance to impose welfare standards on the human interaction with animals in the wild. Nevertheless, the position has changed and social attitudes in many parts of the world now demand that welfare measures are extended to wild animals that are capable of suffering, such as terrestrial and marine mammals (Harrop 2011a). The contemporary arguments for increased welfare protection are well practiced and I will not repeat them here. However, there are new arguments that might require us to return to the debate and examine the question of our interaction with cetaceans from a perspective that ignores the boundaries between conservation and welfare (Harrop 2011a).

Climate change and whale welfare

Irrespective of arguments about the conservation status of some species of whale, we need to consider the wider picture of a world affected by accelerated climate change caused by anthropogenic factors.

First, it is clear that climate change is triggering new ecosystem responses and that alone can have dire consequences for species (Walther *et al* 2002). However, there is a further challenge deriving from the more complex relationship between the ongoing climate-change alterations to ecosystems, direct human impacts on the natural world and climate-change processes.

A world without fragmented habitat, and with healthy ecosystems and biological diversity, would have been much better placed to withstand the predicted pressures deriving from the impending transformations within the global climate. However, the networks of ecosystems and meta-systems that comprise life on Earth are deteriorating rapidly and simultaneously losing resilience. In consequence, climate change, coupled with the fragmentation of habitats and the rapid extinction of species, are together creating a spiral of positive feedbacks that are more likely to exacerbate and accelerate the problem (Scheffer *et al* 2001). Without the foundation of complexity, diversity and linkages within nature, our civilisations could not have arisen and ironically the social, economic and industrial systems and structures that are now giving rise to the causes of the problem — and that we prioritise in national, regional and international policies — would not have come into being.

The effects of this matrix of relationships described as 'climate change' are dramatically demonstrated in the current state of the oceans. Over-harvesting coupled with ocean acidification are rapidly turning sectors of the oceans into deserts. This transformation is taking place at such speed that even the slow-moving global community at the 2010 Convention on Biological Diversity conference recognised that some of the agreed marine targets must be achieved at a significantly earlier date than the CBD's other key targets designed to reverse the rapid decline of the Globe's biodiversity (Opdam & Wascher 2004; Orr *et al* 2005; Hoegh-Guldberg *et al* 2007; Harrop 2011c).

For whales, the projected decline of ocean life systems and also the well-documented alteration of polar conditions (Stroeve 2007), resulting in the alteration of geographical conditions, are likely, at the minimum, to severely affect the viability of certain populations. A number of cetaceans may be able to adapt and alter their geographical ranges but others, with limited range capability through adaptation to specialised ecological niches, will not have this facility. Some species that could otherwise adapt through altering their geographical ranges, such as those depending on polar ice (particularly in the Arctic) or other polar conditions, may have nowhere to go (Simmonds & Isaac 2007).

All of these drastic challenges to the persistence of whale species and the viability of resilient populations are of course only one part of the picture. The oceans continue to be over-harvested (Hughes *et al* 2005) and cetacean by-catch in our over-fished oceans continues to have a significant effect on the viability of whale populations (Read 2004). Moreover, in our heavily trafficked oceans, some whales are also regular targets for ship-strikes (Douglas 2008). When taken all together, the future looks extremely uncertain for many species (Simmonds & Brakes 2011).

Potential issues for further debate

Therefore, when we look to regulate the human-cetacean relationship we should appreciate that, whatever the current status of any whale species, all are threatened because the meta-systems of the oceans are threatened (Harrop 2011b) and our busy and over-fished oceans also severely challenge the viability of most species. Certain propositions about the manner in which we regulate our relationship with cetaceans derive from this overall perspective some of which, if accepted, would only be achievable by amendments to the IWC convention schedule. A non-exclusive list for discussion follows:

• The overriding presumption may now be to focus on cetacean survival and well-being rather than prioritise use. This presumption would affect the overall scope of the IWC's regulatory and other inter-governmental activities. It may also require more proactive intervention in areas such as cetacean by-catch and ship-strikes.

• All scientific research involving cetaceans, whether or not it involves whale killing, may need to be re-examined in the light of a necessity test and, if there are negative conservation or welfare consequences, a proportionality test balancing the negative incidents against the positive aspects of the ultimate results of the research.

• Specific exemptions to the IWC's hunting prescriptions may also need to be examined in the light of the principle described in the first point. Thus, the concept of 'aboriginal subsistence whaling' may similarly need to be re-visited to regulate impact and ensure that only traditional subsistence whaling is permitted. In terms of impact, there may need to be more prescriptive requirements to ensure that these exemptions only relate to small-scale activities that are demonstrably not detrimental to the survival of the target species. In terms of the subsistence nature of the hunting, it may be necessary to expressly require that the hunting takes place in response to community needs and is not in response to external market dynamics.

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