ECOREGION General Advice
SUBJECT EC request on cetacean bycatch Regulation 812/2004, Item 5

Advice Summary

Regulation 812/2004 requires Member States to undertake specified actions in certain fisheries to reduce cetacean bycatch. ICES has reviewed information on effectiveness of mitigation measures for cetacean bycatch and provides advice on the most efficient method for each fishery that may have a bycatch of cetaceans greater than 1.7% of the relevant best estimate of population abundance..

Request

"As part of the Memorandum of Understanding between the European Commission and ICES, the Commission has a standing request to ICES to review the situation of incidental catches of cetaceans and the status of small cetaceans in European waters.

Beyond this standing request, ICES has been requested in 2008 to base its advice on the assessment of the Member States annual reports on the implementation of certain provisions of Council Regulation (EC) No 812/2004.

We would like to renew such request, and ask ICES to consider the following elements in the next assessment and advice:

5. ***Following the assessment made in point b) identify the most efficient mitigation measure for each species concerned by Reg.812/2004 and according to the fishing gear in use.***

ICES Advice

ICES advises that the most effective mitigation measure is to cease fishing using gears that pose a risk to cetaceans. While this may be an option in certain circumstances, ICES recognises that this may have unacceptable social and economic consequences. Spatial and/or temporal closures may be effective in areas or at times where cetacean occurrence is particularly predictable and seasonal. ICES notes that any closure would also require careful planning in order to avoid unwanted consequences such as displacement into areas or to gears that may have other unwanted environmental effects.

ICES advises that acoustic deterrents are the most efficient measure to reduce **harbour porpoise** bycatch in static nets if it is not possible to cease using static nets. All commercially available deterrents that have been tested are capable of reducing harbour porpoise bycatch, but the most suitable deterrent depends on the exact nature of each fishery, including length of net, method of gear deployment etc.

ICES advises that one type of acoustic deterrent, the DDD, has been proven efficient in reducing the bycatch of **common dolphins in pelagic trawl** fisheries for bass in the UK while another acoustic device (Cetasaver) that has been developed in France may reduce dolphin bycatch by about 50%. These devices are likely also to work in VHVO trawls.

ICES advises that there is as yet no proven and operational device to reduce bycatch of **common or bottlenose dolphins in static nets or of striped dolphins** in any net.

ICES advises that the choice of the most appropriate mitigation measure depends not just on efficiency, but on a balance of factors that could be examined in a formal cost-benefit study. Such studies can clarify the trade-offs between issues but ultimately there need to be societal choices and that is beyond the purview of ICES advice. An example would be the costs and benefits of mitigative actions for the critically endangered harbour porpoise in the Baltic Sea. Closures of fisheries would be the only way of guaranteeing no bycatch, but this may have unacceptable social and economic consequences.

Recommendations

ICES recommends that the manufacturers of acoustic deterrents should be encouraged generally to improve reliability and robustness of their devices and to provide cost effective ways of ensuring that their devices are working.

ICES recommends that further experimental and developmental work is required in commercial fisheries, especially for pelagic trawls (common dolphin bycatch in the Atlantic and striped dolphin bycatch in Mediterranean) and to reduce bycatch of common/striped and bottlenose dolphin bycatch in static net fisheries.

Basis of advice

It is reasonably obvious that the cessation or limitation of fishing would lead to a reduction in bycatch. The reduction in static net effort (partly due to quota limitations) in parts of the North Sea may be one reason why the numbers of bycaught harbour porpoises have declined in recent years.

Fishery closures are not though straightforward in their results. Fishery closures can cause displacement, either geographically or into a different type of fishery. A geographic closure may, under some circumstances, place the overall population of cetaceans at a greater risk of bycatch than existed previously. This may particularly occur if the displacement leads to greater fishing effort to compensate for lower catches of fish per unit effort. A displacement to a different fishing method may cause a different unwanted environmental effect.

A temporary closure would be most effective in areas where there is a predictable temporal peak in cetacean abundance or bycatch. One example of this appears to occur with bycatch of harbour porpoises in bottom-set static nets in the Black Sea, where a peak in bycatch appears to occur in spring.

A variety of techniques have been suggested to reduce bycatch of harbour porpoises in static nets. These include a variety of acoustic devices, netting impregnated with material to make them more acoustically opaque and/or stiffer, and ropes containing air (air bubbles are good reflectors of porpoise echo-location sounds). Among these suggestions, only acoustic devices and netting impregnated with barium sulphate have been tested, with only the former being demonstrated to be effective.

Grid technology, escape panels and acoustic deterrents have been tested to reduce catch of common dolphins in pelagic trawls for bass. The first two were found to be only partially successful and were comparatively difficult to rig and use. Several types of acoustic deterrents have been tested with only limited success with only one make being effective. The reasons for this effectiveness are not known.

There is no proven and operational device to reduce bycatch of common dolphins in static nets. Common dolphin bycatch has been reduced at least initially in at least one driftnet fishery, but this reduced rate did not last; so as yet there is no proven and reliable means of using acoustic deterrents to achieve long term bycatch reduction, though trials using DDDs are underway in the UK. Insufficient research/development has occurred to be able to provide reliable advice for mitigation measures to reduce bycatch of bottlenose dolphins in static nets.

Sources

ICES. 2010. Report of the workshop on the Review of Regulation 812/2004 (WK812REV). ICES CM 2010/ACOM:57. Xx pp.