

MANAGEMENT COMMITTEE WORKING GROUP ON BYCATCH

25 September 2000, 1800-1900, Rica Park Hotel Sandefjord, Norway

1. Introduction and Election of Chairman

Arne Bjørge welcomed the participants (see Appendix 1), and agreed to act as Chairman of the Working Group for the meeting.

2. Adoption of Agenda

The Draft Agenda (Appendix 2) was adopted without change. A list of documents available for the meeting is in Appendix 3.

3. Appointment of Rapporteur

Daniel Pike, Scientific Secretary of NAMMCO, was appointed as Rapporteur.

4. Information regarding ongoing monitoring and management of marine mammal bycatches outside the NAMMCO Area

Arne Bjørge gave a general introduction to the history of and recent developments in the issue of marine mammal bycatch. The issue first came to the fore in the 1970's with regard to the high bycatch of dolphins in the Pacific tuna fishery. Increased public awareness stimulated research on the issue, which led eventually to modifications in fishing gear and changes in fishing practices that have largely eliminated bycatch in the tuna fishery without significant reduction in fishing effort or catches of target species. Recent attention to the bycatch issue has focussed on high bycatches of harbour porpoises in some fisheries, particularly in Denmark and the USA.

The parties to the Agreement on Small Cetaceans in the Baltic and North Seas (ASCOBANS) recently passed a resolution that aimed at limiting bycatch at levels of 1.7% to 2% of the population size per year. Further, this resolution recommended that member countries should work towards including marine mammal bycatch in the common fishery policy of the European Union.

Monitoring and mitigation of marine mammal bycatch has for several years been an item for discussion in the IWC Scientific Committee's sub-committee on Small Cetaceans. The focus has been on the use of acoustic alarms, "pingers" that emit sound to warn animals of the presence of fishing gear. In 2000, the IWC Scientific Committee convened a workshop to discuss other mitigation measures. Three topics were discussed: 1) modification of gear and fishing practise, 2) spatial and/or temporal fishery closures, and 3) development and use of alternative fishing gear.

Denmark has a documented bycatches of harbour porpoise in a bottom-set gillnet fishery. An annual catch of around 7,000 porpoises was estimated for a cod fishery in the Central North Sea in 1995. In 1997, Denmark initiated large-scale experiments to test the effectiveness of pingers. These experiments demonstrated conclusively that pingers were effective in reducing harbour porpoise bycatch, at least in the short term. An Action Plan for the mitigation of harbour porpoise bycatch was developed in 1998 in cooperation with scientists and fishers. As a result, the use of pingers has been made mandatory for certain fisheries in high-risk areas and periods.

The USA has also made the use of pingers mandatory for certain fisheries, in combination with temporal and areal fishery closures. However there is some evidence that harbour porpoise are becoming habituated to pingers, and their effectiveness may decrease after the initial beneficial effect.

5. Review progress in monitoring and management of marine mammal bycatches within the NAMMCO Area

5.1 Progress in monitoring marine mammal bycatches by NAMMCO Member Countries

Iceland has analysed the effectiveness of its present system of fishery logbooks for monitoring marine mammal bycatch. It appears that the system has resulted in incomplete data and that changes are required. It is anticipated that the rules governing fishery reporting will be changed over the coming year to improve the situation. In addition, Iceland will increase the number of independent observers monitoring fisheries from vessels this year.

The Greenland Fishery Licence Authority has introduced a new reporting form for observers on fishery vessels that will make the reporting of marine mammal bycatch mandatory. The Department of Industry has also set up a Working Group to work with the issue of bycatch.

The Faroes presently have a logbook system for fishermen that should track marine mammal bycatch. However the incidence of bycatch appears to be low, and is not viewed as a major problem in the Faroes.

In Norway there is presently no system for the reliable reporting of marine mammal bycatch. However it is recognized as necessary and a system is being planned with three main objectives: 1) maximum reliability, 2) minimum of cost and extra labour for fishers, and 3) minimum of cost and additional bureaucracy for government. Several monitoring methods have been considered but a final decision has not yet been made. It is anticipated that a monitoring system will be in place in 2001. The Institute of Marine Research has also been conducting research on some aspects of marine mammal bycatch. Tag return data has been analysed to estimate the bycatch of grey and harbour seals. Observers have monitored some North Sea fisheries. Finally, the harbour porpoise has been chosen as a species for which estimates of abundance and trends in abundance are required, necessitating estimation population level effects of bycatch.

5.2 Evaluation of procedures developed and implemented by NAMMCO Member Countries

The development of bycatch data collection systems is still at a developmental stage in the NAMMCO member countries, so it is too early to evaluate the procedures being used. However, the advantages and disadvantages of various mechanisms were compared by the Working Group in a general sense (see Table 1)

Independent observers on fishing vessels

Independent observers onboard operating fishing vessels is the most widely recognized method to obtain reliable statistics of bycatches. If the fishery is homogenous with regard to bycatches throughout its range, a sub-sample of the fleet can be observed and the results extrapolated to the whole fleet. However, if there is obvious variability over the area or season, the fishery may be stratified and sub-samples of each strata are observed to extrapolate over the respective strata and subsequently summarised over all strata to cover the complete fleet.

Mandatory reporting

Mandatory reporting is regarded as less reliable for obtaining bycatch statistics likely produces underestimates of total bycatch. However, this method may provide guidance towards fisheries, areas and seasons where marine mammal bycatches are likely to be a problem. The statistics from mandatory reporting may be a sufficient basis to establish control mechanisms and to develop correction factors for the reported statistics.

Harbour surveys and control in landing harbours

This system is based on the assumption that incidentally caught marine mammals are regarded valuable contributions to the total catch, and thus will be landed at the harbour together with the target species. By observing fishing vessels when returning to a harbour, statistics may be obtained for the fleet operating from that harbour.

Questionnaires (Interviews)

This method is regarded less reliable than independent observers onboard fishing vessels. However, it may be developed as a supplementary method to mandatory reporting.

Automated monitoring

Monitoring fishing operations is possible by combination of video techniques and sensors. Data may be stored in sealed data loggers on board or transmitted, e.g. via satellites to a monitoring station in the respective countries. The cost of automated monitoring will mainly be related to purchasing and installing the instruments, and may be low compared to observer based monitoring. Although the technology for building automated systems exists, the purpose-built instruments for this type monitoring are not yet developed and available. However development in this field is proceeding rapidly and appropriate technology should be available in the near future.

Table 1. Five possible methods for monitoring marine mammal bycatches are listed with their respective properties.

Monitoring methods	Method properties					
	Reliability	No additional control required	Workload for fishers	Costs	Practicality	Available methodology
Independent observers	+	+	+	-	-	+
Mandatory reporting	?	-	-	+	+	+
Harbour controls	-	-	+	-	-	+
Questionnaires (interviews)	-	-	-	+	+	+
Automated monitoring	+(?)	+(?)	+	+	(?)	-

Conclusion

Only bycatch monitoring by independent observers is regarded as a method that provides reliable results with regard to precision. However, the associated costs may be very high, dependent on the number of observers involved. This method is probably only feasible on larger vessels if observers are placed onboard for additional purposes. Mandatory reporting should not be used as a stand-alone method, but is very useful because it provides a large coverage at very low costs, and may constitute a basis for stratifying control regimes. Harbour controls may be useful in communities where marine mammal bycatches are regarded as valuable contribution to total catches. Automated monitoring is a promising method not yet available, which may be feasible primarily for larger vessels.

6. Mechanisms for NAMMCO member countries to report bycatch to NAMMCO

NAMMCO does not presently have a mechanism whereby member countries report marine mammal bycatch. The Working Group recognized that the most appropriate method will depend on the level of detail required by NAMMCO. Summarized bycatch data could be reported in National Progress Reports by member countries, as is harvest data at present. However, detailed bycatch data suitable for analytical purposes would require a rather complex database and electronic data transfer procedures.

The Scientific Committee noted in 1999 that the use of catch data in stock assessments generally required a detailed knowledge of accuracy, precision, catch composition, exact location of catch etc. which was not achievable in a single comprehensive database. The Committee recommended that detailed catch data be compiled for use in assessments on a case-by-case basis by national research institutes. The Working Group considered that the same might be true of bycatch data. Nevertheless, it was noted that summarized bycatch data should be available to the Secretariat to answer queries and to provide information.

The Working Group therefore decided to ask the Management Committee for direction on the level of detail of bycatch data that should be held at the Secretariat. This will to some extent dictate the reporting mechanism that is required.

7. Mechanisms for Quality Control of bycatch statistics compiled and submitted by NAMMCO Member Countries

7.1 *Review of national quality-control procedures and routines*

It was considered that discussion of this item was premature as bycatch data collection systems are not yet in place in NAMMCO member countries.

7.2 *The role of the NAMMCO Scientific Committee in quality control of bycatch statistics*

Once again it was noted that this will to some extent depend on the level of detail of bycatch data that is to be held at the Secretariat. The Chairman of the Scientific Committee, Gísli Víkingsson, felt that the Scientific Committee would likely limit itself to assessing the effects of bycatch on marine mammal stocks, and would leave the question of quality control of bycatch data to national authorities that have the best knowledge of the fisheries in question. However, this matter has not been discussed by the Scientific Committee.

8. NAMMCO policy on the use and release of marine mammal bycatch data compiled and submitted by NAMMCO Member Countries

It was generally agreed that, if NAMMCO is to act as a clearinghouse for high quality information on marine mammal bycatch, it must have a clear policy on its use and dissemination. As a first principle, it was considered that such data should be freely available. However, it was also noted that such information should not be released until it is fully analysed and validated.

The intersessional correspondence group developed a set of items that may be considered for inclusion in a NAMMCO policy, if the Management Committee decides that a detailed database on marine mammal bycatch should be established at the Secretariat. These items are listed in Appendix 4.

9. Recommendations

- i. The Management Committee should provide guidance on the level of detail required in a bycatch database to be held at the NAMMCO Secretariat. They may also wish to consult the Scientific Committee on this issue. However, as an initial step the Working Group recommends that the format of the National Progress Reports be modified such that summarized bycatch information is reported to NAMMCO on an annual basis.
- ii. Following a decision on the nature of any bycatch database to be held by the Secretariat, the Management Committee should develop a policy on the use and release of marine mammal bycatch data.
- iii. The most promising and widely used mechanism for bycatch data collection in NAMMCO member countries is log book reporting by fishers. This mechanism should be further strengthened, made mandatory and validated by member countries.
- iv. The Working Group on Marine Mammal Bycatch should meet in 2001 immediately before the Annual Meeting to review the progress in this area, and to provide guidance on the harmonization of activities undertaken by member countries.

10. Adoption of the report

The Report was adopted by the Working Group on September 26, 2000.

Appendix 1

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(Chairman)**

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 - 7.2 The role of the NAMMCO Scientific Committee in quality control of bycatch statistics
- 8. NAMMCO policy on the use and release of marine mammal bycatch data compiled and submitted by NAMMCO Member Countries**
- 9. Recommendations**
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Appendix 3

Management Committee Working Group on Bycatch

LIST OF DOCUMENTS

- NAMMCO/10/MC/BC/1 List of Participants
- NAMMCO/10/MC/BC/2 Draft Agenda
- NAMMCO/10/MC/BC/3 Preliminary List of Documents
- NAMMCO/10/MC/BC/4 Draft policy document on the use and release of marine mammal bycatch data

Management Committee Working Group on Bycatch

ITEMS TO BE CONSIDERED FOR POSSIBLE INCLUSION IN A NAMMCO POLICY REGARDING INFORMATION ON MARINE MAMMAL BYCATCH

The following items were put forward by the intersessional correspondence group on marine mammal bycatch. If NAMMCO decides that a database on marine mammal bycatch should be established at the Secretariat, these items may be considered for inclusion in a NAMMCO policy on the use and release of marine mammal bycatch data:

- All information submitted to NAMMCO should in principle be free and available to the general public.
- NAMMCO may act as a forum for development and dissemination of high quality information regarding bycatches of marine mammals in fisheries.
- To achieve the above objective, NAMMCO may compile submitted data and present processed information and informative facts regarding bycatches of marine mammals, impacts on marine mammal stocks, and any management actions taken to ensure that bycatches remain within sustainable levels.
- In cases and communities where incidentally caught marine mammals contribute to the total value of the catch, any bycatch information released by NAMMCO may include factual data on the socio-economic and nutritional value of marine mammal products.
- Previous to any release by NAMMCO, all data submitted by member nations should be subject to validation and quality control. Control may be conducted by the NAMMCO Scientific Committee, or another body defined within the established Secretariat of NAMMCO.
- Bycatch per unit effort, bycatch per unit landed catch, or similar basic data that may be used for further extrapolation to assess bycatch in wider fisheries, or for assessment of total bycatches within areas, should not be released by NAMMCO until sufficient time has been allocated for the NAMMCO Scientific Committee to carry out such assessments.
- NAMMCO has the sole responsibility to ensure safety and protection of any bycatch data and statistics kept on NAMMCO electronic databases.
- NAMMCO should observe any copyrights associated with scientific publications by national institutes or scientists related to national bycatch data submitted to NAMMCO.