

Northwest Atlantic



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Compatibility and Applicability of Discard/Retention Rules  
for Conservation and Utilization of Fishery Resources  
in the Northwest Atlantic

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Summary of the Workshop

I. Current by-catch/juvenile rules in the Northwest Atlantic have been reviewed.

All Contracting Parties apply a variety of measures for the purpose of reducing juvenile catches as well as by-catches of species in excess to applicable catch restrictions.

These measures consist of:

- changing of fishing grounds
- temporary and definitive closures of sensitive areas
- improved selectivity of gear
- minimum mesh sizes
- the use of grids
- minimum fish size
- maximum by-catch limits

These measures imply restrictions applicable to immature fish and by-catches. In some cases they are accompanied by an obligation to discard juveniles and unauthorized by-catches (only legal catches may be retained on board) whilst in other cases it is compulsory to keep on board and to land all catches (discard ban).

The main reason for compulsory landing of all catches is the necessity to record the total fishing mortality caused by fishing activities and to count all catches for quota management.

The main reason for the obligation to discard is to avoid the commercialization of such catches. During inspections at sea and in dockside inspections, inspectors can ascertain that only legal catches are retained on board. In this way, fishermen have no incentive to target illegal catches.

The main problem in applying a no-discard rule is the difficulty to achieve full compliance whilst, on the other hand, the problem related to requirements to discard lies in the fact that the unrecorded and uncontrolled discards make it difficult to assess the real fishing mortality.

Little information is available within Contracting Parties on selectivity and discards in gillnet and longline fisheries in the NAFO area.

Norway applies a discard ban for principal commercial species. The experience with the application of this scheme shows that the very existence of a discard ban has changed fishermen's attitudes in a positive direction. In the case where in certain areas by-catch levels exceed the authorized levels trawling will be prohibited. These areas are defined on the basis of test fishing (commercial fishing vessels chartered by the authorities - budget 3.5 million dollars per year). The closure will last in general some weeks and the reopening is determined on the basis of test fishing. Illegal catches are landed and sold by the sales organizations but fishermen are not paid for. In order to reduce further the catch of small fish, Norway will oblige, as from 1 January 1997, the use of grids in trawl fishery for demersal species.

Canada applies a discard ban for the groundfish fishery. At the beginning of each year, quantitative catch restrictions, by-catch levels mesh sizes and fish sizes as well as monitoring rules are negotiated with the fleets authorized to carry out groundfish fishery in a certain area (small fish protocols and monitoring programmes). The expenditure for implementation of the agreed rules must be borne by the industry. If by-catches or the amount of small fish exceed prescribed limits the fishery is closed down for the whole fleet in the whole area for in principle 10 days but this period may be extended. The decision to close is based on information from observers on board of commercial fishing vessels as well as information from inspections at sea and ashore. Fishermen may market small fish or by-catches but these quantities are counted for quota registration.

In Greenland and the Faroe Islands partial discard laws have recently been introduced. In the Faroe Islands the fishery control authorities may close areas for a short period with a view to protect juvenile fish. Fishermen in these countries may freely market the landings of illegal catches.

In Iceland discarding of catch is generally prohibited. However, a release of live fish of certain length, caught by handline is mandatory. Catch may also be thrown overboard if it is diseased or if it is damaged in a manner that could not be avoided in the process of the fishing concerned. The same applies to fish species which are not subject to provisions of TAC if they are of no marketing value. Iceland has been using a system of area closures for decades to protect juvenile fish and spawning fish. This includes a mandate for the Marine Research Institute (MRI) to close areas immediately for one week if certain by-catch limit is reached upon inspection. There are several regulations concerning fishing gear. For example inspection. The use of sorting grid in the shrimp fishery is mandatory, and the minimum mesh size for cod fisheries is 155 mm. Fish kept on board under the no-discard rules may be marketed.

The European Community, the United States and Japan do not apply a discard ban.

Highgrading means that fishermen attempt to maximize the commercial value of their catch. In fact this problem is not new. Fishermen discard traditionally catches which have no commercial value. Furthermore, when the storage capacity on board is a limiting factor, low value catches are also discarded. More recently examples are observed where subject to market opportunities, the crew is charged by shipowners to discard the low value part of their legal catch. Norway mentioned the example of mackerel where individuals above 600 grammes are exported for a price which is far above the price for individuals under 600 grammes. Since no-discard rules are difficult to enforce at sea, it introduced the requirement that landings must consist of a minimum proportion of small individuals. This minimum proportion corresponds to the natural proportion of small fish in a mackerel shoal based on scientific recommendations.

II. The NAFO Fisheries Commission has established over the last five years a management scheme which is based principally on sea inspections in the Regulatory Area (i.e. hail system, one net rule, minimum mesh size, minimum fish sizes, change of fishing area, the use of grids in shrimp fishing, full observer coverage, and 35% coverage for satellite tracking). An observer on each vessel checks the reality of catch recording whilst inspectors at sea will check the gear used as well as the presence on board of any illegal catch. Furthermore, they will compare the catch composition of the last haul with the recorded catch in the logbook and the catch stocked on board. Minimum mesh size and minimum fish size have been set with a view to reduce discard of undersized fish whilst the change of fishing area and the use of grids also contribute to a reduction in discards.

III. The Scientific Council addressed in its 1992 report the question concerning reduction in catches of juvenile fish (closed areas, closed seasons, gear selectivity). However, there is insufficient information on discards and other unrecorded catch in order to determine the scope of the problem of by-catches of juveniles, high grading and non-targeted species. More accurate analyses can be made when more information is available. At this stage, most groundfish fisheries in the NAFO are under moratoria. The fisheries carried out currently consist of:

- shrimp fishery
- greenland halibut fishery
- groundfish fishery in Div. 3M
- redfish fishery (midwater trawling)
- occasionally some vessels target skate

The shrimp fishery caused by-catches and discards of small redfish which may have been reduced considerable by the introduction of the use of grids.

The Greenland halibut fishery is carried out with mainly by-catches of American plaice and grenadier. The discards of undersized fish are believed to be small.

Some discards will occur in the groundfish fishery and redfish fishery whilst potentially the skate trawl fishery could cause important discards when it would be carried out by many vessels using 130 mm gear. Vessels have carried out skate fishery with large mesh size trawls which avoided successfully by-catches.

Furthermore, the operation of some non-Contracting vessels (using small mesh sizes) adds to the uncertainty concerning the real fishing mortality and notably the fishing of immature fish.

IV. Any fishing activity causes fishing mortality on the target stock as well as other stocks, individuals of which are caught in the same fishing operation. In addition to overall catch limitations, fishing management attempts on the basis of scientific advice to limit catches of immature fish as well as, when necessary, by-catches of non-targeted fish.

The instruments available to fishing management are limitation of the input in the fishery (fishing effort: number of vessels, size of the vessels and the gear and the fishing time) as well as output limitation (quantitative catch/landing restrictions such as TACs and quotas). Gear selectivity and measures to avoid fishing in sensitive areas may be used as instruments to limit juvenile catches and by-catches.

In order to assess the state of fish stocks accurately fishing mortality is an indispensable and most important parameter. When the scientists provide advice, this must be based on the total fishing mortality and not only on the quantity landed (expressed in live weight). The difference between the landed quantity and the total catch caught should be explained by discards and/or unrecorded catches.

For the above reason, it is extremely important that the total fishing mortality is accurately recorded. Apart from changes in sea conditions or other external reasons, the success of any management strategy will depend on the fact that actual fishing mortality is kept within the limits recommended by the scientists and set by fishing management. An efficient enforcement scheme at sea and ashore should ensure proper recording of basic parameters for estimation of actual fishing mortality. The NAFO observer could play a more efficient role in collecting full information on discards.

A full assessment of the efficiency and costs/benefits of different management strategies requires much more information than was made available at the workshop and should take account of the specific situation of a particular region. It was considered that measures with a view to minimize discards such as gear selectivity and avoiding fishing in sensitive areas are much more effective than the no-discard rule as such. Furthermore, it was considered that the risk of marketing illegal catches would vary according to local market characteristics.

- V. Canada has established a management system on the Grand Banks based on a coherent set of management measures. Therefore a derogation to the NAFO scheme appears justified.

The granting of a derogation to other Contracting Parties which do not apply in the NAFO Regulatory Area any alternative management measures would seriously impede on the enforcement strategy in the NAFO Regulatory Area.

Some discussion took place on possible ways in which the Fisheries Commission could manage fisheries according to alternative models. Measures concerning gear technology and changing fishing area (observers on board) fit in the current management strategy. Annual closures of fishing areas seem also feasible. However, temporary closures of areas on the basis of prefixed trigger levels should be examined carefully. In the first place the determination of the areas as well as the commencement and duration of temporary closures should be based on scientific advice (test fishing?) and decided by the Fisheries Commission. These measures should be non-discriminatory and not affect the capacity of Contracting Parties to exploit available fishing opportunities. Finally, the cost/benefit of such measures should be examined.