

ANNUAL MEETING - JUNE 1965Review of Sampling Procedures used by ICNAF Member Countries for  
Estimating Discarded and Industrial Fish

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At the 1964 Annual Meeting of ICNAF the Subcommittee on Sampling considered a request from the Subcommittee on Statistics for advice on sampling procedures for estimating discards.

The importance of obtaining accurate estimates of the quantities of discards by species and their age and size composition was stressed by the Subcommittee on Sampling which accordingly recommended: "that scientists in all member countries report before the next Annual Meeting on their methods of estimating the quantity and composition of both categories of discards referred to in ICNAF Statistics Form 4, and that consideration be given at that meeting to the appropriateness and efficiency of different Sampling Methods."

To ensure this reporting a letter by Mr. DeBaie was circulated by January 7, 1965 followed up by a circular letter of March 31, 1965 on the same matter. It is a pleasure to note that many replies were received and the opportunity is here taken to express the very best thanks to the co-operators.

The present paper summarizes the most essential parts of the various contributions by member countries.

CANADA. Mar. & Quebec (A. C. Kohler)

Data are collected mainly by means of log records and observers at sea. Coverage of the various areas, boat sizes, species and gears is patchy and is probably most accurate for Div. 4T.

The estimates of discards are for species landed only. Species such as skate, silver hake, dogfish etc. and all invertebrates are usually completely discarded. No useful records of amounts of these discards are available.

For further information see J. Fish. Res. Bd. Canada, 20(2): 497-524 by Yves Jean.

CANADA. St. John's (A.T. Pinhorn)

The log-book records completed by Skippers of trawlers landing at Newfoundland ports are used as a means of estimating discards in the Newfoundland fishery. There are spaces reserved on these log-book records for the amounts of fish "kept" and "discarded" for each day of fishing. However, since only a certain number of these vessel skippers supply us with this information, it has been the practice in last years to choose app. 8-10 vessels for which we feel the information is reasonably complete and calculate discard estimates on the basis of these.

It is a doubt whether vessels used are representative of the fleet as a whole. Even the vessels that are reporting discards may not be reporting them on every day of every trip so that there may be a bias introduced here also.

In regard to the industrial fish, this is reported to ICNAF at present as included in the catch of fish on Statistics I and other forms. A separate report of the industrial fish is not feasible or necessary in our case.

A copy of a page of the log-book is submitted.

DENMARK, GREENLAND (Sv.Aa. Horsted):

Discarded fish in Greenlander's fishery occurs only in the pound net fishery (cod) and in the prawn fishery (Greenland halibut, cod, redfish). Estimates of the discard have only been made in cases when research people are on board. The discards are not reported by fishermen.

Industrial fish except capelin has hitherto not been reported, but the total amount has been very small. Fish meal plants are now growing up and the problem about reporting industrial fish other than capelin which is reported will have to be considered in the coming years.

DENMARK, Faroes (Sv.Aa. Horsted)

No special recording of discards or industrial fish except in cases when research people are on board. This way of estimating discards has been used in the last years in Subarea I cod trawl fisheries. Two men have been on board for 1 - 2 months.

GERMANY (A. Meyer):

Each captain has to report the guessed figures of discards and industrial fish on a special form. This form also contains maps of the different statistical areas fished by Germany. The landed fish meal gives us a certain possibility to control these figures. Besides this we can compare the figures given by the captains, which have fished during the same time on the same ground. We think that our reporting system gives rather good figures.

A copy of the form is submitted.

ICELAND (J. Jonsson, verbal inf.):

Discards in the ICNAF area not reported and the proportion is regarded as negligible.

ITALY (Cannone, verbal inf.)

No estimates of discards sampled in the ICNAF area.

NORWAY (E. Bratberg, verbal inf.)

No estimates of discards sampled in the ICNAF area.

POLAND (J. Woźek):

Statistical data are obtained from log-books and from reports on a special form. Captains are obliged to make the entries in kg, although they have only the discarded fish as measured by baskets. It is a source of inaccuracy, but on board factory vessels it is too complicated to measure strictly by weight and it is also a matter of getting at least a part of the fish back to sea alive.

Copy of form (translated to English) submitted.

PORTUGAL (T.de Almeida):

After each haul the fishermen choose the fish to be discarded. The respective weight is estimated and the figures reported in the log-books.

The monthly results of discarded fish on board trawlers are reported on a special form.

The observers of the national unit that operate on board Portuguese trawlers in every fishing season make some random sampling of this fish.

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Copy of special form and of samples (length frequencies by month and division) submitted.

SPAIN (O. Rodriguez-Martin):

The method used to estimate discards consists in the single skipper's sight of the fish. This estimate is reported on a special form. We take into account only the data provided by those skippers we rely on. Nevertheless there are lacunas in several cases (redfish, etc.) and the provided data are not of our guaranty. The total discard is estimated by raising the catch of reporting vessels to total catch.

Copy of special form submitted together with formula used to calculate figures for ICNAF Statistics Form 4.

UNITED KINGDOM (D.J. Garrod):

At the present time there is no routine method of estimating discards on English trawlers. In the past some information has been collected by observers on commercial trawlers (though not in ICNAF area), but it has not been practicable to maintain a regular system either by trained staff, or by designation of crew members. Trawler skippers are not required to maintain fishing log-books so that information can only be obtained from this source by special arrangement. Gulland attempted this in 1957/58 using a record of baskets discarded/baskets retained per haul, but this fell off owing to lack of Skipper incentive, after an encouraging start.

Further efforts are now being made to re-establish a system but it is not yet clear which method will come to be used. It is not practicable to reintroduce "official" log-books specifically for this purpose, but in the near future there may be an attempt by some trawler owners themselves to introduce fishing log-books.

As the nearest approach pilot attempts are being made to test consistency and apparent validity of discards reported by mates who are always interviewed at the end of each voyage. Whilst this is continuing observers will be sent on commercial trips to find out how an intensified observer system might be organized.

Copy of form used by Gulland submitted.

USSR (A.S. Bogdanov)

Since the Soviet fishing vessels do not carry on any discards and do not record fish species destined for industrial use we cannot fill in any form 4a and 4b.

USA (B.E. Brown)

The estimates of discards in 1964 were based on information from captains questioned at the end of their trip.

The procedure used for estimating haddock discard was that the port interviewer questioned essentially all vessel captains landing haddock in Boston (major haddock port) concerning the amount of fish they had discarded, from which percentage of discard was estimated. The estimates of total haddock discard reported to ICNAF are made by applying the Boston data to total US haddock landings.

The procedure for estimating the percentage of yellowtail flounder discarded differs somewhat from that used for haddock. Interviewers in New Bedford (main yellowtail flounder port) questioned only a portion of the vessel captains, and estimates of the percentages of yellowtail flounder discarded are based only on those boats. For ICNAF reporting these percentages were applied to total US yellowtail landings.

The redfish and whiting fleets do not generally discard significant quantities of the species they seek. Small quantities of many other species are discarded, but the available data are insufficient for making valid estimates.