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The Norwegian fishery statistics system

by

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The Norwegian system for the collection and working-up of fishery statistics is now being reorganized. The new system has only partially been implemented, and another one or two years will pass before it is in full operation.

Both the old and the new system take their point of departure in the fact that almost all first-hand sales of fish are through sales organizations, that is, the fishermen are obliged by law to sell their catches through the fishermen's sales organizations, 12 in all.

Under the old system most of the basic data were not only collected, but also worked up by the administration offices of the sales organizations. The Directorate of Fisheries, which is responsible for the preparation of Norwegian fishery statistics, receives already worked-up statistics from the sales organizations on a number of different forms. These show, inter alia, the size of catches and the first-hand value of the various types of fish, the disposition, price, quantity and first-hand value of catches, distributed over place of landing, month, gear, etc., and to some degree also over fishing ground or area. The Directorate of Fisheries then collates the statistics from the sales organizations into official national statistics. Some data are also received from various other sources, e.g. local fishery committees, fishery inspection officials, customs authorities, etc. The logbooks that are received from the skippers of bottom trawlers on 200 GRT, and from drifters and long liners fishing in certain distant waters, give particulars of place of catch, fishing effort involved and yield.

Now that the system is to be radically reorganized it would seem impractical to give a more detailed description of the old system, or to forward the forms used. Instead a description will be given below of the new system as it will act once it has been adopted.

One of the main objectives of the new system is that of obtaining access to the basic data collected by the sales organizations, to develop the logbook system and to draw into the statistics the technical information on vessels available in the register of fishing vessels. This will make it possible to turn out statistics which are more in step with to-day's requirements. This will be done through the establishment of a data bank for fishery statistics. As an enormous body of data is concerned, working-up must take place by automatic data processing. The Directorate of Fisheries has in this connection acquired a fairly small ADP installation. Through terminal attachment to the computer system of the University of Bergen a considerable ADP processing capacity is available.

Certain biological data such as the length measurements for herring, mackerel and capelin are also incorporated into the system.

The fact that most of the sales organizations now use ADP in their internal processing of the basic data obtained for each delivery of catch, as part of their sales activities, has helped to make possible the establishment of a data bank of this type. This makes it possible for the sales organizations to put the relevant basic data on magnetic tape in accordance with a standard record worked out by the Directorate of Fisheries. These tapes must then be sent at regular intervals to the Directorate of Fisheries for statistical working-up.

The information on the individual fishing vessels available in the register of vessels, and the logbook data obtained from the skippers will also be registered on tape in the Directorate of Fisheries. Various techniques are used in the working-up of the data to establish connections between the data on the individual catch received from the sales organizations, and the corresponding logbook data received from the skippers, the information from the register of vessels, and the length measurements for various types of fish obtained from persons specially engaged to take samples of the individual catches.

Thus, in addition to the data in the register of vessels on the length of vessel, engine power, electronic equipment, etc., which is always kept posted to date, the Directorate of Fisheries will receive consecutive data from three main sources:

1. From the magnetic tapes made by the fishermen's sales organizations with data on individual landings. These data are taken by the sales organizations from special forms (actually sales contracts) which are filled out jointly by the fisherman and buyer when the catch is delivered. One copy of the form is sent to the sales organization for use in its sales functions, but serves also statistical purposes. Various such forms are in employ, depending on the type of fish concerned and the sales organization through which the catch is sold. A specimen of these forms is enclosed as Appendix A.

Among the information always given on the forms is the registration number of the vessel, the place and date of landing, the size of the catch, the price and first-hand value distributed over types of fish, the disposition of the catch, the type of gear, the number of men on board and the fishing area. In the case of coastal fishing the name of the district off which the catch has been taken is given as fishing area. In the case of deep sea fishing either the fishing ground or the fishing area is given, the latter on the basis of the divisions given in a chart of which each fish buyer has a copy. A chart showing the main divisions is enclosed as Appendix B. Detailed charts giving a somewhat more accurate division into areas are available for some of the main areas.

On the magnetic tapes sent to the Directorate of Fisheries the sales organizations make reports also on the amount of any subsidy paid, and on certain other particulars that do not appear on the individual forms.

The information received from the sales organizations on the individual deliveries will not only be used for the preparation of ordinary fishery statistics, but will also supply an adequate foundation for the calculation of the fishing effort put into the different coastal fisheries, which are mainly carried on by small boats making one-day trips, and of the geographical distribution of the effort.

For deep-sea fisheries and fisheries in distant waters more detailed information on fishing area and fishing effort are required. With the view to obtaining such data logbooks will be used in these fisheries. The other main source of information will thus be:

2. Logbook data obtained from the skipper on vessels engaged in deep-sea fisheries or fisheries in distant waters. After each completed fishing trip the skipper will tear out the copy sheets from the logbook and send them to the Directorate of Fisheries through the sales organizations. The organizations have been drawn into the dispatch routine to make checking possible. At the Directorate of Fisheries the logbook data will be punched, and entered on magnetic tapes. The system incorporates references between logbook data and the delivery data mentioned under Point 1 above. The logbook gives, inter alia, information on the individual sets or hauls with regard to position, fishing time, type of gear, quantity of gear, method of fishing, catch, etc.

At the present 3 different types of logbook are in use:

- ./.
 - ./.
 - ./.
- a. For bottom trawlers over 200 GRT (App. C)
 - b. For long liners and drifters (App. D)
 - c. For purse seiners and trawlers in pelagic fisheries (App. E)

The logbook system will gradually be developed to include other types of deep-sea fishing.

The logbooks mentioned under a. and b. have also been in use under the old system, and have not yet been given the final form required for adaptation to the new system of statistics. The logbook mentioned under c., however, has been designed for use with the data system, but is at the moment in use only on a limited number of vessels, on a trial basis. Our objective is a standardization of the logbooks used in the different types of fishery.

3. The third main source is length measurements, etc., for herring, mackerel and capelin received from specially engaged persons who take measurements based on samples from the individual deliveries. These particulars are sent in on separate forms (App. F) which are sent to the Directorate of Fisheries for punching and working-up in the system.

The system described will provide the Directorate of Fisheries with a data bank giving all the relevant statistical data for every single delivery of catch, with regard to fishing effort, fishing area, size of catch and first-hand sale. This will make it possible, for instance, to print out mechanically, on STATLANT-forms, statistics for international organizations and to submit catch and effort data according to rectangles.

The Directorate of Fisheries has the legal powers necessary to require the fishermen and sales organizations to submit the data described above.

With regard to the relatively insignificant catches that are not sold through the sales organizations, the collection of data on size and value of catches will take place, as earlier, through the local fishery committees. Information on landings abroad will, as earlier, be collected through foreign statistical connections, although these data must be supplemented by logbook data, etc. from the individual fishing boat. This part of the system has not yet been worked out.

Sluttseddel - Sales contractNorwegian

Noregs Sildesalslag

Fisker nr.

Kjøper nr.

De skraverte felt fylles ut av laget

Navn

Adresse

Fartøynavn

Reg. mrk.

Leveringssted

Dato

Fangstdagbok

Tur nr.

Redskap

Fangst-herred/område

Anvendelse

Leveringsmåte

Kvantum

Fiskesort

Sortiment, kode

Pris

Fett - %

Tørrstoff - %

Anmerkninger

Øyepål

Fórfisk

Tobis

Lodde

Storsild, vårsild

Nordsjø-sild

Annen anvendelse enn olje/mel

Kg, Hl

Fordelt i %

Størrelse

Lev. underskrift

Kjøpers underskrift

English

The Norwegian Herring Sales Organisation

Fisherman no.

Buyer no.

The shaded squares to be filled in by the sales organisation

Fisherman's name

" address

Name of vessel

Vessel registration no.

Landing place

Landing date

Logbook no.

Trip no.

Fishing Gear

Fishery ^{ing} municipality/or area according to map

Disposition

Landed as (for example fresh, salted, frozen, dried, round, gutted, without head etc.)

Quantity

Species

Size group, code

Price

Fat, per cent

Solids, per cent

Remarks

Norway pout

Fish used as animal feedingstuffs

Sandeel

Capelin

Winter Herring

North Sea Herring

Other disposition than reduction

Kilogram, hectoliter

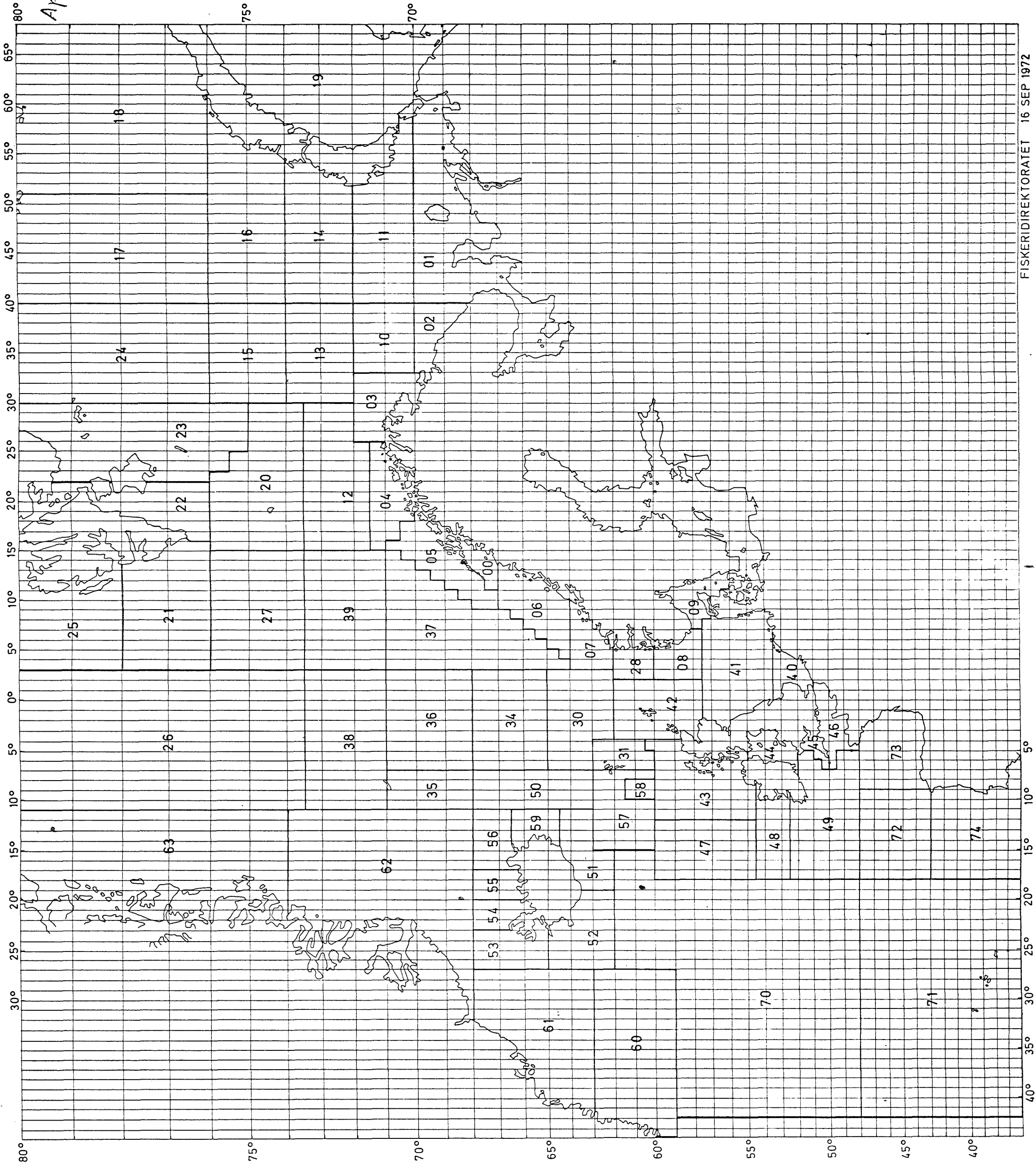
Distribution in per cent

Size

Fisherman's signature

Buyers signature

Appendix B



Dagbok for trålfiske = Logbook for trawlers (large meshed trawl)
over 200 GRT.

<u>Norwegian</u>	<u>English</u>
Fartøyet	Vessel
Reg.merke, navn	Registration no., Name
Tråltur nr.	Trip no.
Dato	Date
Tråltrekk nr.	Haul no.
Trålen nådd bunn kl.	Trawl reached to ^{the} bottom at (clock)
Innhiving av trål begynt	Hauling back startet at (clock)
Tråltrekkets varighet	Duration of towing
Timer, min.	Hours, Minutes
Strebank eller posisjon når trålen trekkes	Fishing ground or position at time of hauling back
Ved avbrudd i fisket oppgi årsaken	If fishing is interrupted, record reason and no. of hours
Fangstmengde kg/kasser/hl	Catch quantity (nominal catch) in kilogram boxes or hectoliter
Torsk	Cod
Sei	Saithe
Hyse	Haddock
Uer	Redfish
Kveite	Halibut
Andre sorter	Other species
Utkast. Fiskesort og mengde	Discard. Species and quantity

Dagbok for line-/garnfiske = Logbook for longliners/gillnettersNorwegian

Fartøyets navn

Reg.merk.

Kjenningsignal

Tur nr.

Gikk fra, havn

Den

Tilbake, havn

Kapteinens navn

Dato

Fangstfelt, fiskebanke eller
posisjon

ICNAF underområde

Redskap

1. Flagg, 2. Flagg

Merke

Dybde

Antall krok/garn

Tid

Redskapen satt kl.

Redskapen trukket kl.

Fangstmengde i kg rund vekt

Fangstmengde i alt

Torsk

Blåkveite

Uer

Steinbit

Kg

Anv.

Merknader

English

Vessel name

Registration no.

International signal letters

Trip no.

Sailed from (port)

On the (date)

Returned at (port)

Captain's name

Date

Fishing ground or position

ICNAF Subarea

Fishing Gear

First flag, second flag

Marked

Depth

No. of hooks/nets

Time

Gear set at (clock)

Gear hauled at (clock)

Catch quantity (nominal catch) in
kilogram

Total catch quantity

Cod

Greenland halibut

Redfish

Wolffishes

Kilogram

Disposition

Remarks

Fangstdagbok for trålere og snurpere = Logbook for trawlers
(small meshed trawl) and purse seiners

<u>Norwegian</u>	<u>English</u>
År	Year
Fangstdagbok nr.	Logbook no.
Registreringsmerke	Vessel reg.no.
Tur nr.	Trip no.
Antall mann om bord	No. of men on board
Redskapsart	Type of gear
Salgslag	Sales organisation
Sluttseddel nr.	Sales contract no.
Kode	Code
Rutine	Routine
Sted/havn	Port
Mnd.	Month
Dag	Day
Avgang	Sailed from
Ankomst	Arrived at
Levering	Landed at
Posisjon	Position
N/S	North/South
Ø/V	East/West
Grad, min.	Degree, minute
Radioinnmelding	Radio registration of catch
Hal/kastnr.	Haul/set no.
Setting trål/not	Trawl/net set
Dag, time	Date, hour
Halets varighet	Duration of towing
Fangstmengde	Total catch quantity (nominal catch)
Hl, Kg, KS	Hectoliter, kilogram, boxes
Fiskesort	Main species
Merknader	Remarks

Oppgaveskjema for råstoffprøve = Form for reporting of sample data (length measures etc) for herring, mackerel, capelin, polar cod and blue whiting landed at reduction plants.

NorwegianEnglish

Salgslag	Sales organisation
Analystasjon	Laboratory for analysis of content of fat and solids
Redskap	Fishing gear
Råstoff	Species
Fangstfelt	Fishery ^{land} area (according to map)
Reserververt plass	Space not to be filled in
Registreringsmerke	Vessel registration no.
Saltseddel	Sales contract no.
Prøve nr.	Sample no.
Fangstdato	Catch date
Fabr.	Reduction plant (code)
Lev.dato	Landing date
Gruppe nr.	Group no.
Antall hl	Quantity (hectoliter)
Fett	Fat content, per cent
Tørrstoff	Solids, per cent
Vekt målt	Weight of sample
Analysedato	Date of analysis
Fisker	Signature of skipper
Prøvetaker	Signature of sample collector
Analystasjon	Signature of analysis laboratory
Lengdefordelinger	Length distribution
Cm-grupper	Centimeter groups