Northwest Atlantic Fisheries Organization

Serial No. N298

NAFO SCS Doc. 81/VI/8

SCIENTIFIC COUNCIL MEETING - JUNE 1981

National Reports on Collecting and Processing Fisheries Statistics

Compiled by

NAFO Secretariat

1. At the 1978 Annual Meeting of ICNAF, the Standing Committee on Research and Statistics (STACRES) noted the apparent general deterioration in the reporting of statistical data and a lack of consistency in data reported by some countries, and recommended "that each member country submit to the Secretariat prior to the 1979 Annual Meeting a detailed description of its national system of collecting and processing fisheries statistics" (ICNAF Redbook 1978, page 87). Response to this recommendation resulted in a report by one country (Norway) to the 1979 Annual Meeting.

2. At the 1979 Annual Meeting, it noted that ICES had already accumulated similar reports for its member states, and the Secretariat was requested to urge countries to supply similar reports relevant to their fishing activities in the Northwest Atlantic (ICNAF Redbook 1979, page 94). At the time of the June 1980 Meeting of the Scientific Council, it was noted that a few countries had submitted or were preparing their reports (NAFO Sci. Coun. Rep. 1979-80, page 94).

3. All reports accumulated prior and subsequent to the June 1980 Meeting of the Scientific Council are given in the following appendices. Two of the reports are extracts from ICES Cooperative Report No. 91 (1980): Federal Republic of Germany and United Kingdom (England and Wales). Dr Schumacher, in correspondence with the Secretariat, indicated that the same system is used for the ICNAF (NAFO) and ICES regions and that the same description (ICES Coop. Res. Rep. No. 91, pages 15-17, 87-95) was applicable to the Northwest Atlantic. Regarding the United Kingdom (England and Wales) fisheries statistics system (ICES Coop. Res. Rep. No. 91, pages 25-27, 128-133), Mr B. W. Jones in a letter to the Secretariat, indicated that there was no point in supplying a description of the old system of data-processing as the system was currently being revised. Consequently, only the collection procedures are described.

There was no recent report for Faroe Islands, but an earlier document (ICNAF Res. Doc. 73/112) contained a description of the system developed in 1973. Likewise, there was no recent report for Canada other than the description prepared in 1974 (ICNAF Res. Doc. 74/114). Both of these reports are included here for completeness.

A report (in Italian) was received from Italy, but a partial translation indicates that the description and forms pertain to Italian fisheries in the Southeast Atlantic and Mediterranean Sea and not to the North Atlantic.

APPENDICES

APPENDIX I

A Note Concerning the Canadian Atlantic Fishery Statistical System *

by

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The overall responsibility for the provision of Canadian Atlantic fishery statistical data is vested in the Fishery and Marine Service of the Department of the Environment. The responsibility center designated within the Fisheries and Marine Service for the Newfoundland Region, headquartered in St. John's, is the Economics and Intelligence Branch, and for the Maritime Provinces, (Nova Scotia, New Brunswick and Prince Edward Island) headquartered in Halifax, is the Fisheries Intelligence Branch. The officer in charge of the Fisheries Intelligence Branch, Halifax, is designated as the coordinator of all Canadian Atlantic fishery statistics for domestic and international purposes.

The Canadian Fisheries Act and the regulations associated with the Act outlines the statistical reporting requirements of those engaged in the fishing industry. Basically, the Act states that firms must report all fish caught, processed, prices paid, numbers of fishing craft, numbers of employees, etc. Data is acquired from the fishing industry on a number of monthly and annual documents which are completed either by the fishing skipper or the processing firm and collected by a fishery officer or forwarded directly to the office responsible. The source documents (approximately 20 types) are broadly divided into five categories to provide socio-economic and biological data: (1) purchase slips to provide the species, size, quantity, value, area of capture, port landed, gear used, name of boat; (2) product schedules to determine products produced, stocks, exports and sales; (3) census and licensing forms to maintain data on numbers of fhishermen, fisheries engaged in, size and type of fishing vessels, gear and

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* Issued previously as ICNAF Res. Doc. 74/112.

equipment and capital expenditure; (4) price report forms and (5) various vessel logs to determine catch/effort/discard data. (It is compulsory for Canadian vessels in excess of 25 G.R.T. to maintain log books.)

These documents basically ensure that statistical data is available for all catches by boat, describe the boat type, the area of catch and landing, the product and value derived. The system is not without shortcomings. Quality control is sometimes difficult and the accuracy is to some extent dependent upon the value of the species caught and the socio-economic conditions existing in various areas. In general the accuracy of the catch data derived from weighouts exceeds 90%.

To ensure that the necessary source documents are received by the Fisheries and Marine Service Data Offices, general fishery officers in the various landing ports are responsible for submitting data, maintaining contact with the fleet and with plants and clarifying data received. In a few instances where the work load is significant, full time statistical officers are employed to provide the required statistical material and conduct to sampling.

The source documents, once received in one of the two regional offices, are edited, coded, entered on cards or tape and prepared for electronic data processing. The staff in the two statistical offices total 40 man years. About 80 per cent of this staff is engaged directly in duties involving the production of statistical series. The remainder are involved in quasi statistical duties associated with resource management, surveillance, public information and short term studies.

For many years, those standardized statistical series involving large quantities of data have been computerized. The series which are currently computerized refer to specialized research tables, annual submissions to international agencies, series on species landed by community, district and season for resource management purposes, tabulations with respect to catch by specific vessel types and categories and tables concerning species and gear types under quota management. The statistical units do not own or operate their own computer facilities. Data is merely edited, coded, and entered on punch cards or magnetic tapes and then tablulated on computers on a time rental basis. The units do, however, employ computer systems analysts to administer the system and provide alterations as required.

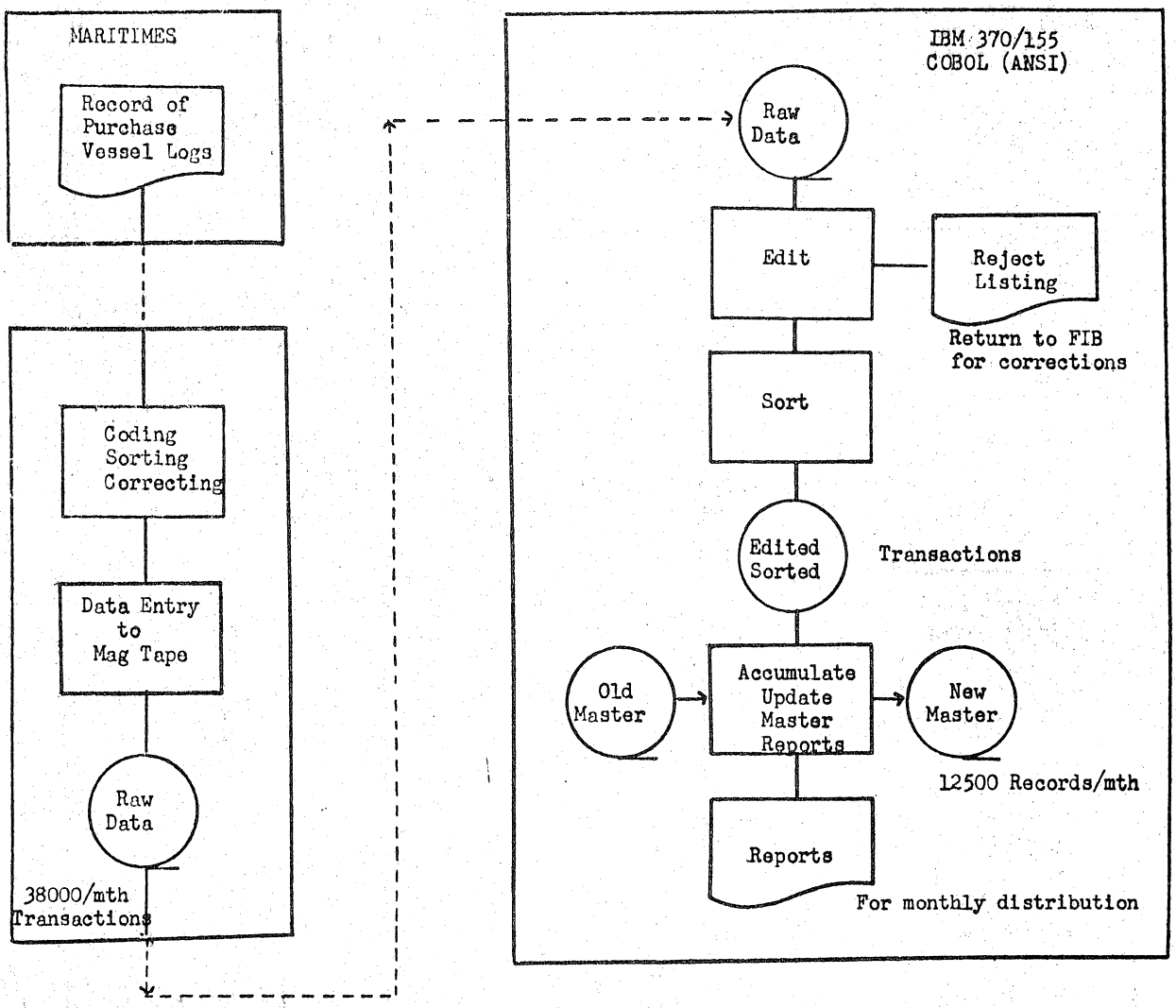
The basic publications of the statistical services of the Fisheries and Marine Service are few. Various weekly, monthly, and annual statistical series referring to landings, quota reports, prices paid, products produced and stocks held are released to the industry, the news media, to Provincial Governments, and to interested agencies and groups. Most of the official publication of the data is by Statistics Canada (The Canadian Government Statistical Bureau) in its monthly and annual fisheries statistical publications.

For the purposes of domestic current and planned resource management procedures and as requested by one international commission, various refinements have been made in the Canadian Atlantic fishery statistical reporting system during the past year. Planned future changes will involve the integration of sampling for size and age into the standardized series, the provision of more feedback to the suppliers of the basic information, the introduction of a grid system (not larger than 1^{o} square) for area of capture data, and the tabulation and release of catch/effort data on a monthly basis.

As a trial during 1974 it is proposed to implement an automated system to extract information from various files residing on magnetic tapes at a central computer site. This system would collect queries during the day concerning landings, catch/effort, etc., process the material during the night and supply the originator with the requested data at a terminal, printed at a remote computer, or mailed.

FLOWCHART OF PROGRAM AND SELECTED SAMPLES OF FORMS USED FOLLOW.

WEIGHT AND VALUE TABULATING SYSTEMS FOR FISH LANDED IN THE MARITIMES (CANADA)



FISHERMAN'S SALES SLIP

NAME OF BUYER	
ADDRESS OF BUYER	
NAME OF SELLER	
ADDRESS OF SELLER	DATE SAILED
PLACE FISH BOUGHT	DATE LANDED
NAME OF BOAT	C.F.V. NO.
GEAR USED	ICNAF DIV.

QUANTITY	SPECIES AND SIZES	PRICE	AMOUNT	

F-860 (REV 1971) ⚠

ENUMERATION OF FISHERMEN AND FISHING CRAFT, 19
DÉNOMBREMENT DES PÊCHEURS ET DES EMBARCATIONS DE PÊCHE, 19

Name of fisherman
Nom du pêcheur _____

District _____ Address
Adresse _____

PART I – GENERAL INFORMATION
1re PARTIE – RENSEIGNEMENTS GÉNÉRAUX

1. Extent of employment in fishing: (check √)
Temps de l'occupation à la pêche (cocher √)

Full time – *A plein temps*	☐
Part time – *A temps partiel*	☐
Occasional – *Irrégulier*	☐

2. Fisheries engaged in: (check √)
Pêche de (cocher √)

	In-shore *Côtière*	Off-shore *Hauturière*
Clams – *Coques*	☐	☐
Crabs – *Crabes*	☐	☐
Groundfish – *Poissons de fond*	☐	☐
Herring – *Harengs*	☐	☐
Irish Moss – *Mousse d'Irlande*	☐	☐
Lobster – *Homards*	☐	☐
Mackerel – *Maquereaux*	☐	☐
Oysters – *Huîtres*	☐	☐
Salmon – *Saumons*	☐	☐
Scallops – *Pétoncles*	☐	☐
Shrimp – *Crevettes*	☐	☐
Smelts – *Éperlans*	☐	☐
Swordfish – *Espadons*	☐	☐
Other – *Autres*	☐	☐

PART II – SMALL CRAFT (less than 10 tons)
2e PARTIE – PETITES EMBARCATIONS (moins de 10 tonneaux)

Motor boats: – *Barques motorisées:*	Number – *Nombre*
less than 20 feet – *moins de 20 pieds*	
20 - 24.9 feet – *pieds*	
25 - 29.9 " "	
30 - 34.9 " "	
35 - 39.9 " "	
40 feet and over – *40 pieds et plus*	
Row boats – *Barques à rames*	
Carrying smacks – *Bateaux collecteurs*	

Cost if acquired new this year – Engine $ _____
Coût d'un moteur acquis neuf cette année

Hull – *Coque* $ _____

Vessel purchased complete
Bateau acheté complet $ _____

PART III – LARGE CRAFT (10 tons and over)
3e PARTIE – GRANDES EMBARCATIONS (10 tonneaux et plus)

Name of vessel
Nom du bateau _____

Registry No. _____ Year Built _____
No d'immatriculation *Année de construction*

Length o.a. *Longueur hors-tout* _____ Length reg. *Longueur enregistrée* _____ Gross tons *Tonnage brut* _____

Engine: type of fuel (check √)
Moteur: genre de combustible (cocher √)

gas – *essence* ☐ diesel ☐

Cost if acquired new this year – Engine
Coût d'un moteur acquis neuf cette année $ _____

Hull – *Coque* $ _____

Wheelhouse equipment
Équipement de timonerie $ _____

Vessel purchased complete
Bateau acheté complet $ _____

Wheelhouse equipment (check √)
Équipement de timonerie (cocher √)

Loran	☐
Radar	☐
Radio telephone – *Radiotéléphone*	☐
Echo Sounder – *Échosondeur*	☐
Navigator – *Pilote automatique*	☐
Direction finder – *Indicateur de direction*	☐
Fish finder – *Dépisteur de poisson*	☐
Other (specify) – *Autres (préciser)*	☐

Type of gear used during the year (check √)
Genre d'engin utilisé durant l'année (cocher √)

Otter trawl – *Chalut*	☐
Line trawl – *Palangre*	☐
Scallop drag – *Drague à pétoncle*	☐
Danish seine – *Seine danoise*	☐
Scottish seine – *Seine écossaise*	☐
Purse seine – *Seine à poche*	☐
Midwater trawl – *Chalut pélagique*	☐
Gill net – *Filet maillant*	☐
Pair seine – *Chalut boeuf*	☐
Harpoon – *Harpon*	☐
Other (specify) – *Autres (préciser)*	☐

PART IV – EXPENDITURES FOR FISHING GEAR
4e PARTIE – DÉPENSES POUR ENGINS DE PÊCHE

Total cash outlay for fishing gear during the year
Total des déboursés pour engins de pêche durant l'année $ _____

F-046 REV. 7/70

196 4 VESSEL ADVANCE TYPE OF GEAR 35 Yankee CAPTAIN W. Gray TOTAL CREW 8 (including captain)

TRIP. NO. 12 DATE SAILED Sept. 10th 2:00 p.m. DATE RETURNED Sept. 17th 7:30 a.m. PORT SOLD Halifax BUYER J. Smith

MONTH AND DATE	POSITION LAT. LORAN OR DECCA READING	POSITION LONG.	DEPTH FATH.	EFFORT TOWS OR SETS	EFFORT HRS. OR LINES FISHED	ESTIMATED CATCH (LBS.) SAVED COD	HAD.	RED.	HAL.	PLAICE FLOUNDER	YELLOW-TAIL	WITCH GREYSOLE	W.FLOUNDER BLACKBACK LEMONSOLE	OTHER G'FISH		DISCARDED COD	HAD.	OTH.	REMARKS WEATHER. BOTTOM. TEAR UPS. OTHER VESSELS. ETC.
Sept. 11	1H1 2550	1H2 3425	40-50	2	3	1000	1000			Yel. 2000									Arrived Banks 8.00 P.M.
Sept. 12	1H1 2550	1H2 3480	30-38	11	16½	4000	2000			Yel. 1000		Pl. 1000	Skate 2000			800		Yel. 200	Moderate West Fine and Clear
Sept. 13	1H1 2440	1H2 3440	30-40	8	12	3000	2000			Yel. 1000								Yel. 300	Moderate West Fine and Clear
Sept. 14	1H1 2490	1H2 3390	110	6	15			13000		Wit. 2000									Fresh S.S.W. Net torn
Sept. 15	1H1 2575	1H2 3460	34-38	12	18	4000	4000			Pl. 1000		Yel. 1000				200	200		Foggy: hard bottom
Sept. 16	1H1 2575	1H2 3460	35-37	9	14	7000	10000			Pl. 1000						500	200	Pl. 150	Thick Fog

NOTE: (1) For "Fishing Effort" record number of hauls and total hours net on bottom.

(2) "FLOUNDERS" should include: Plaice (PL), Witch or Greysole (WIT), Yellowtail (YEL) and inshore winter flounder (W.FL).

(3) "OTHER G'FSH" should include: Pollock, Cusk, Hake, Catfish and Skate.

(4) Record Quantities discarded at sea for main species.

USE NEW SHEET EACH TRIP

CONFIDENTIAL

Environment Canada Fisheries and Marine

Environnement Canada Pêches et sciences de la mer

APPENDIX II

A New System of Fisheries Statistics in the Faroe Islands

by

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Fiskirannsókarstovan, Tórshavn

Referring to ICNAF Summ. Doc. 73/2 (Serial no. 2931) page 10, it should be sadly admitted, that the Faroe Islands have no good record in statistical affairs.

Better, than giving apologies for this, is to be able to point out that the record is up to improvement.

By jan. 1st, 1973 there has by law been introduced a statistical system, which should fulfil all requirements for accuracy, promptness and the claim on every statistical system of delivering a realistic picture of the world, in this case the universe of the fishing fleet of Faroe Island.

The system works with two subsystems, one based on the landings of fresh fish in the Faroe Islands, mainly covering Faroese, Icelandic and East-Greenland waters, and one covering the North Sea fleet and the distant water fleet.

This last system is the one, which has interest in the ICNAF area, and shall be described in some more detail. It is based on a combination of the traditional ship's log and a fishing logbook.

THE LOGBOOK.

The lay-out of each side in the logbook is seen in fig. 1, and the maps, covering ICNAF AREA, with Faroese system of statistical squares in Fig. 2 and 3.

The uppermost part of each page is for the general log data, position, course, bearings, events on board etc.

The lower part is a detailed fishing log. For each fishing operation one line is filled up.

According to the variety in type of the Faroese fishing fleet and in order to make the filling up of the logbook so easy as possible, the logbook is in 4 subtypes.

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* Issued previously as ICNAF Res. Doc. 73/114.

S 1 for ships using gill-nets, longline and handline.

S 2 for trawling for human consumption.

S 3 for trawling for reduction purposes.

S 4 for purse-seiners.

For the different ship categories this 4 subtypes give data on following items.

1. Date
2. Hour
3. Depth in fathoms at the beginning of the fishery.
4. Statistical area by statistical squares. Each square is 1 degree longitude x 1/2 degree latitude. (see fig. 2 and 3).
5. Effort. For longline number of hooks,
   for gill nets number of nets,
   for handline number of handline x fishing time,
   for trawlers hours the trawl has fished, with an accuracy of 1/4 hour,
   for purse seiners searching time for each catch in hours.
6. Catch of each species given to tons, below, for purse seiners and industrial trawlers, to tons, with one cipher behind the point for trawlers, liners and gill net for human consumption.
7. Discards by species and weight. (tons)

The weight of the catch is estimated on the deck, with exception of the longliners, which give the weight of gutted fish.

Each page in the logbook is in duplo. When the book is filled up, a copy is produced. This copy is taken out along a perforation, and sent to the Fisheries Laboratory in Tórshavn.

The captain in this way keeps the fishing logbook. This book will be of great use to the skilled captain to choose fishing ground and operate the the gear in the most efficient way. It can be said, that the skipper gets a detailed manual of fishing the different grounds in return for giving the detailed statistics. With the great mobility in the fishing fleet, this should be of great interest.

PRACTICAL CONSIDERATIONS.

The ships get the log at the shipping offices, which also control that the books are filled up regularly. The next step of control is at the Fisheries

Laboratory in Tórshavn, each page sent in being inspected. If deficiencies are observed a note is sent to the captain. As the schemes are to be handled by computers, deficiencies in the filling up, later on will be discovered as errors, and the computer will print out a note on that.

The logbook was, in a provisional form, tested on board on the ships in 1972. The experience gained in this test year shows, that a close contakt with and a high niveau of information to the fishing fleet is perhaps the most important thing.

By broad-casting, papers and fishery periodicals it has been tried to convince the captains about the need of better statistics, and that it is in the interest of the fishing fleet to get the new system to work.

Further the captains were invited to give their comments on the provisional logbook in the test year 1972.

As a result of this the 4 subtypes now working to a great extent are designed by them, thus securing that the lay out has been suitable.

Thus the combination of cooperation, own interest, and control should secure a very high percentage of return.

It should be born in mind that the introduction of the fishing logbook has not increased the amount of dreary paper work on board, because the new logbook has replaced the traditional one, which the ships former were obliged to have.

FURTHER HANDLING OF THE DATA.

In the first place the logbook should fulfil the requirements of the international bodies, ICNAF, NEAFC and FAO, at least procuring data for STATLANT 21 A and B, and ICNAF stat. 4. The data will be punched on cards and come out as computer print-outs.

Faroese statistics will come out in this way for the first time in 1974, covering the year 1973.

A comparison with the proposed format of an international logbook shows, that the Faroese logbook also, at least, will fulfil the requirements of this system.

A MODEL OF FACTORS INFLUENCING CATCH.

As a matter of fact the philosophy behind the design of the logbook is that each catch result will depend upon several variables or functions of variables. The items in the logbook should give empirical values to the variables in a model of the catch.

Presumably the model will be much like the model described by Stark (J.Cons. Int.Explor. Mer 133, no. 3. pag. 478-482, 1971).

Through the logbook design information will be got on the following variables.

1. Effort and gear.
2. Ship. (By the identification of ship, the specifications of the ships can be got. The fishing power then will be some function of the specifications).
3. Fishing ground.
4. Time of the year.
5. Time of day and night.
6. Weather. Wind and direction.

The model remains to be built in detail. When this is done it will be possible to test it by means of statistical analysis, and get a picture of the influence of the different factors. Access to advanced computer programs for statistical analysis will be necessary.

RESULTS

The results from the test year 1972 are given in tables 1 - 5. In this period the participation in the system was voluntary and the logbook was in a provisional form.

This did not render 100 % coverage, and did not aim to do it, but these partial results should have some interest and could be used to break down Faroese catch on area and gear.

This can be done by comparing the number of ships reporting in each category, and the total number of ships participating in fishery in the ICNAF area given in table 7, together with total catches.

To give a picture of the returns from the final system, introduced by law January 1973, the reports from the stern-trawler "Sjúrðarberg" for the first 4 months in 1973 are given in table 6.

What now still is left to do is to work out a system and computer program for the automatic handling of data.

Garna-, linu-, snellu

Hesin seðil skal verða sendur
Fiskirannsóknarstovuni, Tórshavn

Uppgávuseðil S 1

Skip	Skrásetingar nr.	Fráfaringardagur	Komnir á fiskileið	Farnir at sigla heim	Heimkomudagur
[illegible]	FDMM	27/3-73	31/3-73	14/4	18/4

Samdegursfrágreiðing: Dato: 4.4.73

Kota: Garn 04, Lína 05, Snella 06, Snori 07	Sett/ farnir undir fiskiskap Kl.	Dýpi	Drigið/ givnir við fiskiskapi Kl.	Veiðinýtsla Ísfiskur 01, Salt 02	Garnatal Stykkjatal Tal av snellum/ snørum	Ætt og vindmegi	Veiðiøki (punta-nr.)	Fiskasløg met: Toskur	Hýsa	Brosma	Lo[illegible]ur	Hákelling	[illegible]	Annað	Útkast tons	Viðmerkingar
05	23[00]	100	22[30]	01	350	SV2	DN26	3,5	0,5	1,5		0,3			0,3	ÚTKAST HÁKELLING

Trolarar, til matna

Hesin seðil skal verða sendur
Fiskirannsóknarstovuni, Tórshavn

Uppgávuseðil S 2

Skip	Skrásetingar nr.	Fráfaringardagur	Komnir á fiskileið	Farnir at sigla heim	Heimkomudagur
[illegible]	1111	4/1	12/1	5/5	13/5

Samdegursfrágreiðing: Dato: 25/2-73

Undirskrift skip: [illegible]

Trol: Kota Botn- 01, Flóti- 02, Reyðu- 03	Trol á botni Kl.	Kós, meðan tógað varð (kumpass-strikur)	Dýpi (favnar) tá, trolið varð skotið	Wirur út (favnar)	Trol hálað Kl.	Dýpi (favnar) tá hálað varð	Tóg-ingartíð	Ætt og vind-megi	Veiði-øki (punta-nr.)	Fiskasløg met: Toskur	Hýsa	Upsi/ Reyður	[illegible]	Annað	Útkast tons	Viðmerkingar
01	12[30]	180	200	540	15[45]	180	3/4	W4	AR52	2,5				3.0	3.0	ÚTKAST SMÁUR KONOH FISKUR

Fig. 1 LAYOUT OF THE FAROESE LOGBOOK

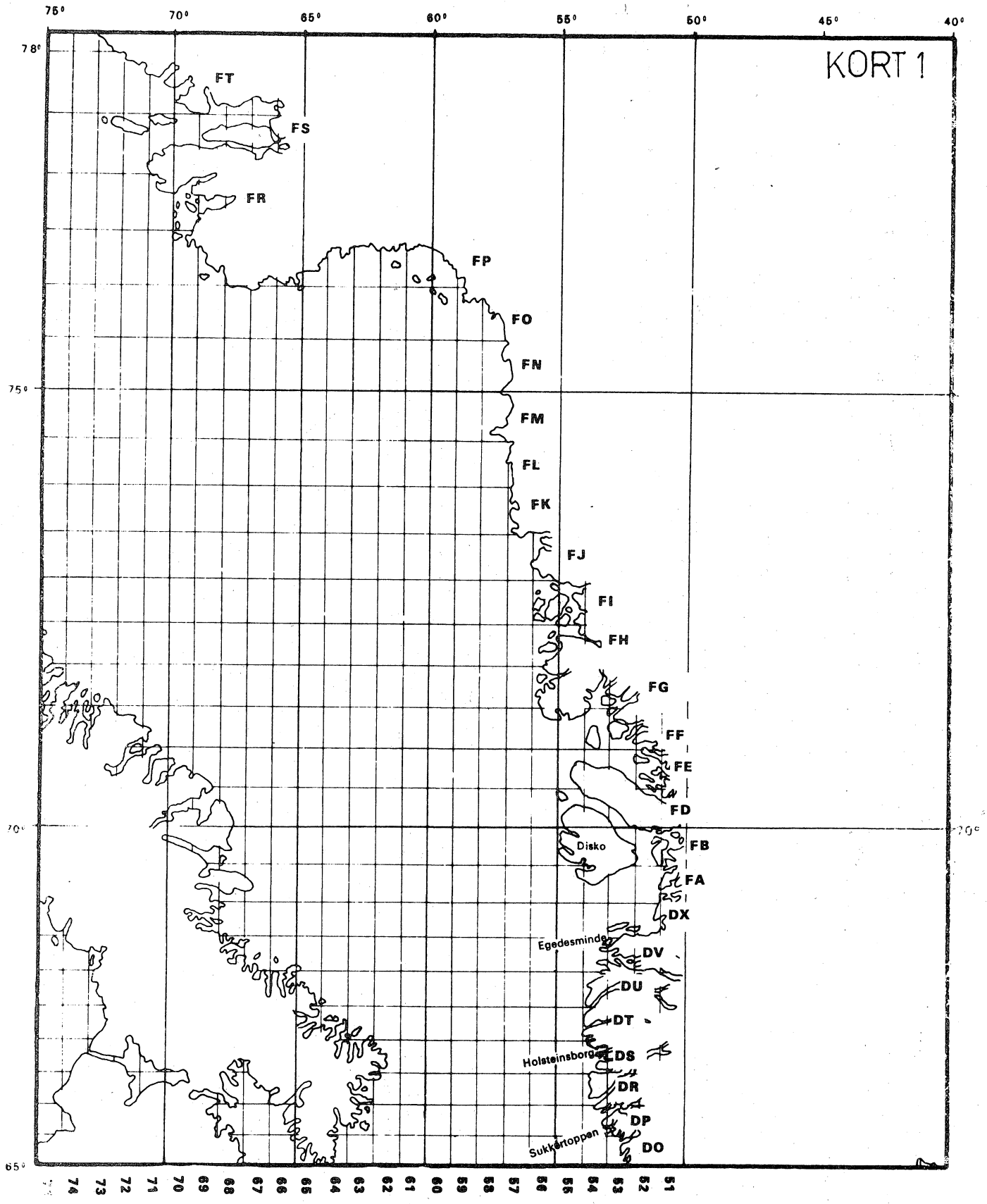
KORT 1
75°
70°
65°
60°
55°
50°
45°
40°
78°
75°
70°
65°
FT
FS
FR
FP
FO
FN
FM
FL
FK
FJ
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Fig. 2

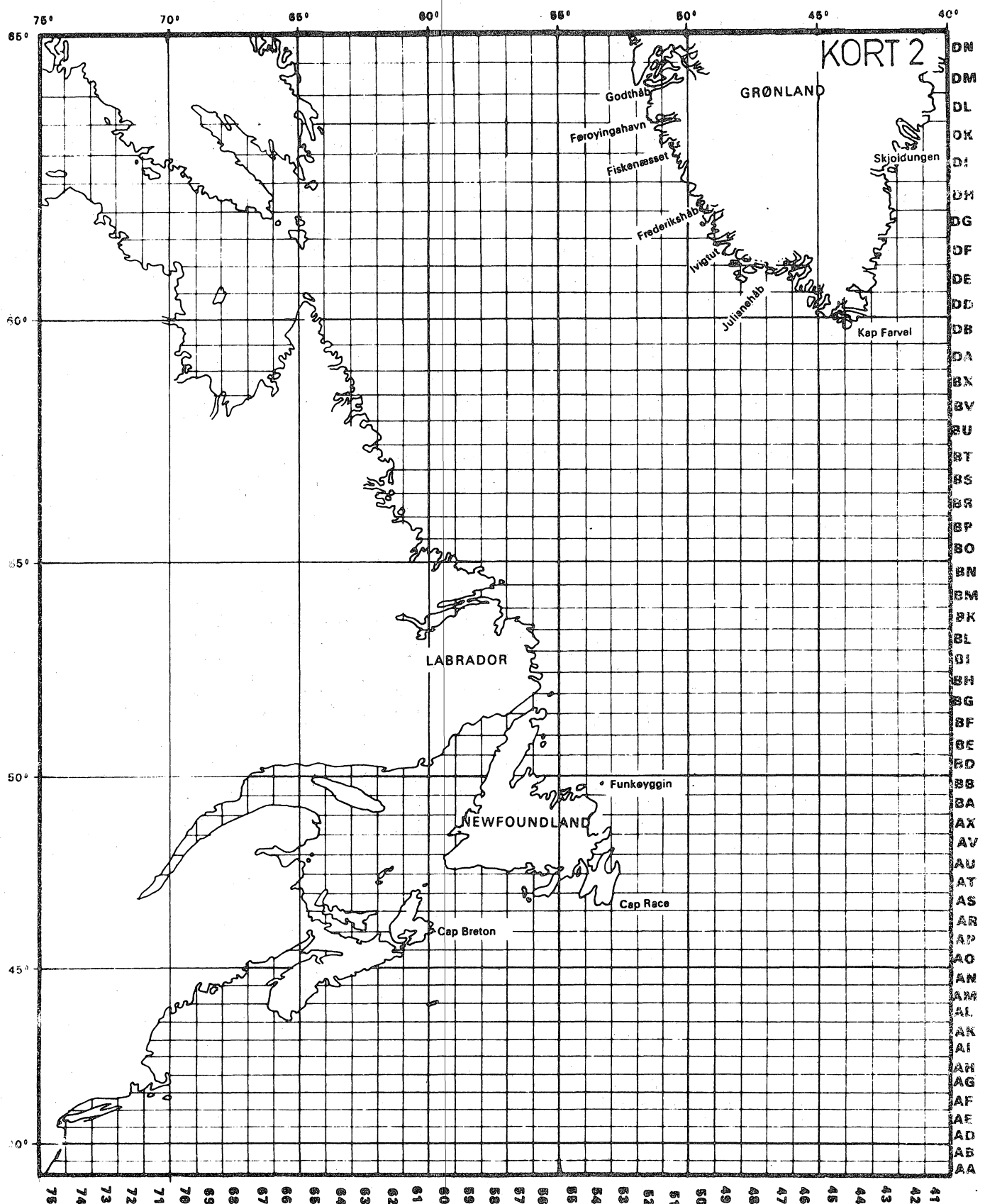
KORT 2
GRØNLAND
Godthåb
Færøyingahavn
Fiskenæsset
Frederikshåb
Ivigtut
Julianehåb
Kap Farvel
Skjoldungen
LABRADOR
NEWFOUNDLAND
Funkeyggin
Cap Race
Cap Breton
75° 70° 65° 60° 55° 50° 45° 40°
65° 60° 55° 50° 45° 40°
DN DM DL DK DI DH DG DF DE DD DB DA BX BV BU BT BS BR BP BO BN BM BK BL BJ BH BG BF BE BD BB BA AX AV AU AT AS AR AP AO AN AM AL AK AJ AH AG AF AE AD AB AA
75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41

Fig. 3

TABLE 1 FAROESE DATA
LONGLINERS, RETURNS, 1972,
PROVISIONAL LOGBOOK, FROM 3 SHIPS

CATCH: TONS OF COD ROUND FRESH WEIGHT
EFFORT: IN 1000 HOOKS
CPE: IN TONS PER 1000 HOOKS

COD

ICNAF div.	3 M			3 K			2 L			3 P_s		
Month	CATCH	EFFORT	CPE	CATCH	EFFORT	CPE	CATCH	EFFORT	CPE	CATCH	EFFORT	CPE
Mar.	124.0	654	.19									
Apr.	316.0	1122	.28									
May	588.0	2247	.26									
Jun.	374.0	1639	.23	38.0	255	.15						
Jul.	3.0	40	.08	23.0	205	.11	660	478	.14	204	472	.43
Aug.	174	619	.28							169	449	.38
Sep.	322	1217	.26									
Okt.	122.0	741	.16									
Nov.	33.0	190	.17									

TABLE 2 FAROESE DATA
FACTORY SHIPS
RETURNS, 1972,
PROVISIONAL LOGBOOKS
1 SHIP

CATCH: TONS ROUND FRESH WEIGHT
EFFORT: HOURS THE TRAWL HAS FISHED
CPE: TONS PER TRAWL HOUR

C O D

ICNAF div.	‡C			‡D			‡D + E			‡E		
Month	C	E	CPE	C	E	CPE	C	E	CPE	C	E	CPE
Feb.	302.0	104	2.9	4.0	7.75	.5	69.0	73	.9	1.0	3.25	.3
Mar.	305.0	166.75	1.8	1.0	1.5	.7	130.0	120.5	1.1			
Apr.	518.0	321.25	1.6	7.0	5.0	1.2	25.0	28.25	.9			
May	9.0	13	.7							49.0	24.25	2.0
Nov.	65	88.25	.7	0.0	.75	0.0	30.0	27	1.1			

ICNAF div.	‡F		
Month	C	E	CPE
Feb.	36.0	28.25	1.3
May	23	48	.5

GREENLAND HALIBUT

ICNAF div.	NORTH OF 2 G			2 H		
Month	C	E	CPE	C	E	CPE
Oct.	132.5	213.75	.6			
Nov.	75	91.25	.8	23	82	.3

TABLE 3 FAROESE DATA
SIDE TRAWLERS
RETURNS, 1972
FROM PROVISIONAL LOGBOOK
3 SHIPS

CATCH: TONS ROUND FRESH WEIGHT
EFFORT: HOURS THE TRAWL HAS FISHED
CPE: TONS PER TRAWL HOUR

	C O D											
ICNAF div.	4 Vs			4 Vn			4 R			4 T		
Month	C	E	CPE	C	E	CPE	C	E	CPE	C	E	CPE
Jan.	88.0	172	.5	377.5	171	2.2						
Feb.	120.5	194	.6				190	71	2.6			
Mar.	322.0	334	1.0									
Apr.							126.5	231	.6	53	88	.6
May				11.0	39	.3	293.5	267	1.1	10.5	27	.4
Jun.				10.1	75	.1						

ICNAF div.	4 W			3 Pn		
Month	C	E	CPE	C	E	CPE
Feb.	1.8	5	.4	175	27	6.5

Additional fishery on Greenland Halibut, and other flatfishes, has not been worked up.

TABLE 4 FAROESE DATA
STERN TRAWLERS
RETURNS, 1972
FROM PROVISIONAL LOGBOOKS
1 SHIP

CATCH: TONS ROUND FRESH WEIGHT
EFFORT: HOURS THE TRAWL HAS FISHED
CPE: CATCH PER TRAWL HOUR

	C O D, BOTTOM TRAWL											
ICNAF div.	1C			1D			1F			1E		
Month	C	E	CPE	C	E	CPE	C	E	CPE	C	E	CPE
Jan.	230.5	128.0	1.8	91	40.5	2.2						
Feb.	1.0	11.25	0.09	184.5	123.25	1.5	24.0	24.5	1.0	1.1	3.5	.3
Mar.												
Apr.	18.0	25.5	0.7				2.5	24.25	0.1	24.5	32.75	.8
May	2.5	8	0.3	28.5	32.25	0.9	137.5	42.5	3.2	38.5	29.5	1.3
Jun.							33.0	19	1.7	334.5	330	1.0
Jul.	26.5	84	0.3	15.5	26.25	0.6	0.5	10.4	0.05	57.0	128	.4

Table 4. (Cont'd)

PELAGIC TRAWL

ICNAF div.	3 K			3 M			4 T			4 W		
Month	C	E	CPE	C	E	CPE	C	E	CPE	C	E	CPE
Jan.												
Feb.	7.0	18.75	0.4	3.5	12	0.3						
Mar.				20.0	37.5	0.5				128.5	209.5	0.6
ICNAF div.	4 R											
Apr.												
May	24.0	37.5	0.6	1.5	5	0.3	10.5	18	0.6	111.0	190.5	0.6
Jun.				0.0	2	0.0						

TABLE 5 FAROESE DATA
GILL NETS
RETURNS, 1972
PROVISIONAL LOGBOOKS
FROM 2 SHIPS

CATCH: TONS ROUND FRESH WEIGHT
EFFORT: NUMBER OF NETS
CPE: KG PER NET.

	C O D											
ICNAF div.	1 C			1 E			1 F			EAST OF 1 F		
Month	C	E	CPE	C	E	CPE	C	E	CPE	C	E	CPE
Jul.	21.0	1215	17	31.0	1680	18						
Aug.				77.0	3000	26						
Sep.							32.0	1560	20	167.0	5250	32
Oct.				107.0	2265	47				79.0	3480	23
Nov.				210.0	2055	102				24.0	840	29
Dec.				147.0	870	169						

TABLE 6 FAROESE DATA

"SJÚRÐARBERG"
STERN TRAWLER, PELAGIC TRAWL
WETSALTED COD.
RETURNS FROM THE NEW LOGBOOK SYSTEM
JAN. - APRIL 1973.

CATCH round fresh cod, tons
EFFORT hours the trawl has fished
CPE catch per trawl hour, tons

by statistical squares, faroese system (see fig.2 and 3.), and ICNAF divisions

MONTH	JANUARY			FEBRUARY			MARCH			APRIL		
AREA	CATCH	EFFORT	CPE	CATCH	EFFORT	CPE	CATCH	EFFORT	CPE	CATCH	EFFORT	CPE
Faroese squares												
AN 60				55.0	61.75	.9	373.0	177.25	2.1			
AP 60				43.5	42	1.0	274,0	269.25	1.0			
AR 60	2.0	2.25	.9				152.0	107.25	1.4	50.0	43.5	1.1
AV 60				46.0	40.25	1.1	0.0	2.25	0.0	8.0	13.75	.6
AX 60	103.0	37.25	2.7	127.5	149	.9				.5	3.75	.1
AN 61				5.5	7.5	.7	44.5	44.75	1.0			
AO 61				49.5	39.25	1.3						
AT 61										150.0	127.25	1.2
AO 59				72.0	71.25	1.0	11.5	2.25	4.9			
AP 59				16.5	13.5	1.2	9.0	26	.3			
AT 59							48.5	16	3.0			
AO 58							105.0	79.5	1.3			
ICNAF Divisions												
4 R	103.0	37.5	2.7	173.5	189.25	.9	0.0	2.5	0.0	8.5	17.5	.5
4 Vn	2.0	2.25	.9				152.0	107.25	1.4	50.0	43.5	1.1
4 Vs				187.0	188.25	1.0	667.5	474.75	1.4			
4 W				55.0	46.75	1.2	44.5	44.75	1.0			
3 Pn							48.5	16	3.0			
3 Ps-4 Vs							105.0	79.5	1.3			
4 T										150.0	127.25	1.2

TABLE 7 FAROESE DATA

CORRECTED DATA ON FAROESE SHIPS FISHING IN ICNAF AREA 1972

SUBAREA 1

	Gross tonnage	H.P.	Size crew
Handliners			
Hvítabjørn	262	330	16
Kongshavn	254	350	22
Small shore handline boats:			
Number:	Average tonnage:	H.P.	Average crew: Total crew:
4	3,5	10-20	4-5 18
Longline:			
Gamli Andrass	272	800	23
Side trawlers:			
Brandur Sigmundarson	1037	1500	41
Magnus Heinason	1037	1500	43
Skálaberg	954	1500	43
Stern trawlers:			
Sjúrðarberg	847	1980	42
Kap Farvel	724	1830	40
Factory ship:			
Stella Karina	834	2200	50
Stella Kristina	834	2200	50
Vesturvón	834	2200	50
Gill nets for salmon:			
Bakur	354	595	15
Leikur	467	770	14
Hvítanes	248	625	13
Vesturland	218	600	11
Prawn trawlers:			
Vesturvarði	190	460	11
Oknin	289	330	11
Gill nets:			
Reynsatindur	252	400	18
Venus	296	500	18
SUBAREA 2, 3, 4.			
Longliners:			
Gamli Andrass	272	550	20
Mars	264	570	20
Kvikk	256	450	24
Norðaldan	444	960	26
Rasmus Effersøe	421	660	24
Hans Erik	426	900	26
Jógvan S.	268	450	24
Pison	271	450	24
Borðoyarnes	413	800	26
Side trawlers:			
Brandur Sigmundarson	1037	1500	41
Magnus Heinason	1037	1500	43
Skálaberg	954	1500	43
Vágbingur	791	1470	40
Stern trawlers:			
Sjúrðarberg	847	1980	42
Kap Farvel	724	1830	40
Factory ships:			
Stella Karina	834	2200	50
Stella Kristina	834	2200	50
Vesturvón	834	2200	50

Statistical System Used for Collecting and Processing North Atlantic Fishery Statistics in Federal Republic of Germany*

Since 1972 the German fisheries statistics for the trawlers and luggers have been based on the entries of the daily catches on "logbook forms" by the captains.

FRG 1 shows this logbook form in English language and FRG 2 shows 5 logbook forms (numbered 1 to 5) of a trip of the factory ship "Österreich" which lasted from 11 April to 20 July 1972. The fishery started on 17 April off Southeast Greenland with catches of cod and redfish. A small proportion of cod, redfish, and some other species were turned into fishmeal. From 25 April to 2 June the ship moved between West Greenland (1F to 1C) and Southeast Greenland, steamed to Iceland (3-5 June) and fished for six days off NW Iceland. On 6 June "Österreich" worked with midwater trawl, catching mostly saithe. Then on 12 June the factory ship steamed to northern Norway and the Barents Sea and fished there with pelagic trawl for cod, haddock, and saithe. The fishery ended off the Lofoten area with bottom trawl catches from 30 June to 15 July. On the 20 July the ship was back with a load of 689 tonnes of frozen products, fishmeal and oil (see FRG 3).

The completed logbook sheets (FRG 2) together with the weight of the landings (FRG 3) are sent to the Statistics Department of the Institute for Sea Fisheries in Hamburg, where they are immediately worked up in the following way on two special forms. The first form (FRG 4) is for the entries of the guessed catches (in baskets) split up by months, statistical fishing areas, and type of nets used. The second form (FRG 5) is for the calculation of the catch in round fresh weight by months, statistical fishing areas, and type of net used. The upper 26 lines of FRG 4 and 5 are for the catch for human consumption, the following 7 lines for fish for fishmeal, the next 7 lines are for discarded fish, and the last 4 lines for trip days, fishing days, fishing hours, and type of net used.

The first thing which has to be done is to transform the daily catch positions into the corresponding fishing areas. Then the guessed daily catches (in baskets) are added up for each month for the different species in the different fishing areas (FRG 4). The corresponding fishing days and the fishing hours are also totalled. FRG 4 in the first column shows that in April off SE Greenland 1,380 baskets of cod, 630 baskets of redfish, (giving a total of 2,010 baskets), were worked up for human consumption, and further 140 baskets (cod, redfish and by-catch) were turned into fishmeal. No fish were discarded. The trawler was fishing on 8 days for 45 fishing hours with bottom trawl. In June (second and third columns) the trawler fished off NW Iceland for 1 day with pelagic trawl and 5 days with bottom trawl. The last column of this form gives the totals.

The next step is to multiply the weight of the different landed products by the corresponding conversion factors to get the round fresh weight of the different products (FRG 3) and thus the round fresh weight of the different species. These totals from FRG 3 for the species going for human consumption are entered in the upper part of the first colum of FRG 5. The live weight of 935,624 kg cod was frozen. This total figure for cod is now split up for the monthly catches in the different fishing areas according to the guessed catch of FRG 4. This is done also for the other species. Those species caught in very small quantities and which were not reported by the captain on the logbook form, such as 263 kg halibut, 1,162 kg Greenland halibut, 2,100 kg sharks, are placed according to the best available knowledge; e.g. sharks mostly are caught off East Greenland.

The fish turned into fishmeal are treated in the following way: the guessed catch of industrial fish and the quantity of offal from fish processing (the difference between the calculated round fresh weight and the landed weight of fish plus 3 times the weight of the oil) is compared with the quantity of landed fishmeal under the assumption that the output of fishmeal is 20% of the quantity of the raw material. Now there are 3 possibilities:

1. If the quantity of landed fishmeal is less than could have been produced from offal and reported industrial fish (as in the case in this trip of "Österreich"), the figures for industrial fish given by the captain are taken as they stand (some ships have to throw overboard part of the raw material for fishmeal due to less stowing capacity for fishmeal).

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* Extract from ICES Coop. Res. Rep. No. 91, pages 15-17, 87-95.

2. If the quantity of the landed fishmeal is bigger than 1/5 of the quantity of the total raw material (from offal and industrial fish) then the figures of the guessed catches of industrial fish species are correspondingly enlarged.

3. If the quantity of landed fishmeal is bigger than 1/5 of the raw material from offal, and the captain has forgotten to report the quantity of industrial fish, the surplus quantity of fishmeal is multiplied by 5 and gives the missing quantity of industrial fish. This calculated quantity goes into the category "Other fish" or if there are comparable trips from the same grounds with industrial fish reported by species, this calculated industrial fish is split up by species correspondingly.

On board wet-fish trawlers, no guts are turned into fishmeal. All landed fishmeal therefore originates from industrial fish. The guessed figures by the captain are correspondingly changed. If the captain has forgotten to report the catches of industrial fish, its quantity is calculated from the landed fishmeal and split up in the same way as reported under (3) above or goes into the category "Other fish". The quantity of discarded fish is counted as reported by the captain.

The trips of the wet-fish trawlers are treated in the same way as those of the factory ships.

FRG 1

Name of ship .... Trip from .... to .... 19.. Captain ....

Date	Processing			Position		Bottom trawl hours net on bottom	Pelagic trawl/hours in fishing depth	Fish for human comsumption in baskets										fish for fish-meal in baskets					discarded fish in baskets					Weather Ice	Special remarks
	fresh	frozen	salted	Latitude	Longitude			Herring	Cod	Haddock	Saithe	Redfish	Catfish	....	....	....	....	Herring	Cod	Redfish	....	....	Herring	Cod	Redfish	....	....		

FRG 2

Name of ship ."Österreich"..... Trip from ..11.4..... to .20.7..... 1972 Captain .Hartinger.....

1) Date	Processing: fresh	Processing: frozen	Processing: salted	Position: Latitude N	Position: Longitude W	Bottom trawl hours net on bottom	Pelagic trawl/hours in fishing depth	Fish for human consumption in baskets: Herring	Cod	Haddock	Saithe	Redfish	Catfish	.....	.....	.....	.....	fish for fish-meal in baskets: Herring	Cod	Redfish	.....	by-catch..	discarded fish in baskets: Herring	Cod	Redfish	.....	.....	Weather Ice	Special remarks
17.4.		x		60.22	41.58	1			100																			snow NNE 9-10	
18.4.		x		60.21	41.57	8			440										10			30						E 3	
19.4.		x		60.20	41.57	9			380			40								10		10						WSW 3	
20.4.		x		60.13	42.04	7			140			140							5	5		10						snow N 7	
21.4.		x		60.13	41.50	2			60			130								10		10						NNE 9-10	
22.4.		x		60.20	42.15	6			110			120								5		5						N 2	
23.4.		x		61.15	41.22	7			100			50										10						S 7	
24.4.		x		60.19	41.53	5			50			150								10		10						SSW 3	
25.4.		x		60.48	49.21	5			40			50																ESE 2	
26.4.		x		62.10	52.10	1			0			0																N 4	
27.4.		x		64.18	54.45	12			280			80								10		10						N 5	
28.4.		x		64.12	53.32	15			800										20			10						NNW 2	
29.4.		x		64.12	53.32	15			390										10	10		20						SSE 2	
30.4.		x		64.01	53.19	3							no fishing															SSE 10	
1.5.		x		64.00	53.30	10			100				50							10		10						SE 2	
2.5.		x		62.02	50.43	7			240										50			10						SSE 3	
3.5.		x		62.05	50.49	17			450										20			30						N 3	
4.5.		x		61.51	50.36	13			300			20								10		10						calm	
5.5.		x		61.31	50.28	6			80			70								10		10						NW 3	
6.5.		x		62.17	42.50	2			300			70							10	10		20						S 3	
7.5.		x		62.11	42.11	6			1500			350							20	30		50						NNE 2	
8.5.		x		60.14	41.56	9			100			100										10						NNW 2	
9.5.		x		60.14	41.56	9			1200										30			50						snow N 3	
10.5.		x		60.12	41.48	6			280										10			10						snow N 8	
11.5.		x		59.30	43.45	4			20																			NW 2	
12.5.		x		60.12	42.04	4			970										15			15						ENE 5	
13.5.		x		59.45	45.55	3			500										10			60						SSE 6	
14.5.		x		60.11	44.19	2			130										10			10						S 5	
15.5.		x		60.12	42.05	5			170													10						N 4/5	
16.5.		x		60.13	42.05	5						no catch																S 3	
17.5.		x		59.06	44.15	4			250										10			50						NW 6	
18.5.		x		59.48	46.00	8			100																			NW 3	
19.5.		x		59.36	45.42	9			100					50								10						NW 7	
20.5.		x		58.30	43.32							steaming East Greenland																WNW 8	
21.5.		x		62.23	40.26	2						no catch																calm	
22.5.		x		61.12	41.27	10			950										20			30						NW 2	
23.5.		x		61.12	41.27	10			260			50							10			20						NNE 3	
24.5.		x		61.08	41.34	8			150			30							10			10						NNE 8/9	
25.5.		x		61.08	41.34	9			420			30							10			40						N 5	
26.5.		x		61.15	41.28	9			90			20										10						calm	
27.5.		x		59.02	46.00							steaming West Greenland																NNW 3	
28.5.		x		61.28	50.23	12			180			60								10		10						calm	
29.5.		x		62.13	50.49W	9			100			40										10						NE 3	
30.5.		x		63.29	52.35W	12			50				50									10						SSE 2	
31.5.		x										bunker Faeringerhavn																SE 6	
1.6.		x		62.56	52.06W	10			300			30	70						10			20						revolving	

FRG 2 (ctd)

Name of ship "Österreich" Trip from 11.4. to 20.7. 1972 Captain Hartinger

3) Date	Processing: fresh	frozen	salted	Position: Latitude N	Longitude	Bottom trawl hours net on bottom	Pelagic trawl hours in fishing depth	Fish for human consumption in baskets: Herring	Cod	Haddock	Saithe	Redfish	Catfish	.....	.....	.....	.....	Fish for fish-meal in baskets: Herring	Cod	Redfish	.....	by-catch	discarded fish in baskets: Herring	Cod	Redfish	.....	by-catch	Weather Ice	Special remarks
2.6.		x		62.49	51.55W	10			50			50	60						10			20						calm	
3.6.		x		59.19	48.23W						steaming		Iceland															calm	
4.6.		x		60.30	40.55W						steaming		Iceland															NE 2	
5.6.		x		64.16	32.37W						steaming		Iceland															NE 3	
6.6.		x		66.09	25.43W		20		100		700		30									10						NE 3	
7.6.		x		66.54	24.25W	15			300				70						10			20						NE 2	
8.6.		x		66.49	24.45W	17			250				40									10						calm	
9.6.		x		66.30	25.17W	17			200		310		30						10	10		20						SW 3	
10.6.		x		66.22	25.20W	15			350		70		20						10			10						S 2	
11.6.		x		66.22	25.20W	13			300										10			10						NE 3	
12.6.		x		67.05	13.22W						steaming		Norway Coast															E 2	
13.6.		x		68.44	1.14E						steaming		Norway Coast															ENE 4	
14.6.		x		70.12	17.25E						steaming		Norway Coast															NE 3	
15.6.		x		71.12	27.50E		8		700		30								10	10		20						N 3	
16.6.		x		70.43.5	31.05E		20		100		50																	NW 2	
17.6.		x		70.45	31.04E		17		1000		50								10	10		30						SSE 3	
18.6.		x		70.45	31.10E		17		150	50												30						S 3	
19.6.		x		70.05	33.26		9		100	50	50											30						ESE 4	
20.6.		x		70.41	31.22		18		800	150												20						SSE 2	
21.6.		x		70.42	31.16		19		100	50																		ESE 3	
22.6.		x		70.44	31.14		22		800		300								10	10		10						ESE 4	
23.6.		x		70.44	31.12		22		500	200	100								10	10		50						SE 4	
24.6.		x		70.49	31.10		22		300	100	100											40						SSE 2	
25.6.		x		70.47	31.12		22		50	50									10	10		20						SE 2	
26.6.		x		70.46	31.13		19		20	20	30								10			10						SSE 2	
27.6.		x		70.48	30.56		18		120	100												30						calm	
28.6.		x		71.02	29.52		23		300	50	70								30			50						calm	
29.6.		x		71.21	27.56		5							no catch															ENE 3	
30.6.		x		69.57	16.47		13		100	40	40																	calm	
1.7.		x		69.57	16.55	19			50	30																		calm	
2.7.		x		69.58	16.47	20					800								10			50						NNE 2	
3.7.		x		69.59	16.46	19				50	600								10	10		10						calm	
4.7.		x		69.58	16.45	18					700								10	10		30						calm	
5.7.		x		69.55	16.45	20				20	120								10			30						SW 3	
6.7.		x		69.42	16.13	13					300								10			20						E 2	
7.7.		x		69.41	16.12	17					400								10			20						E 4	
8.7.		x		69.38	16.14	21					320								10			30						NNE 2	
9.7.		x		69.42	16.13	19					300								10			20						W 5	
10.7.		x		69.41.5	16.09	18					300								10			20						W 2	
11.7.		x		69.39	16.03	18				50	400	50										20						revolving	
12.7.		x		69.38	16.08	21					300		20						10			30						NE 3	
13.7.		x		69.37	16.19	17					300											10						SSW 2	
14.7.		x		69.42	16.14	16				20	650	10	10						10			10						N 2	
15.7.		x		69.41	16.12	17			10		170								10			10						WSW 5	

FRG 3 "Österreich" (11.4.-20.7.72), landings in kg

	landed weight	conversion factor	round fresh weight	
Cod, filet without bones	216 729	3.48	754 217	935 624
Cod, filet	61 494	2.95	181 407	
Haddock, filet without bones	850	3.37	2 865	21 990
Haddock, without head	12 419	1.54	19 125	
Saithe, filet without bones	25 446	2.73	69 468	300 002
Saithe, filet	94 870	2.43	230 534	
Ling, filet	262	2.30		603
Redfish, filet without bones	7 895	3.37	26 606	97 832
Redfish, filet	9 097	3.00	27 291	
Redfish, without head	22 764	1.93	43 935	
Catfish, filet	5 904	3.29		19 424
Halibut, without head	189	1.39		263
Greenland halibut, without head	836	1.39		1 162
Shark, filet	811	2.59		2 100
Allowance	720	1.04		749
V-cuts *)	22 593	-		
Fishmeal	174 255	-		
Oil	32 076	-		
				1 379 749

*) part of the V-cuts turned into fishmeal. No conversion factor for V-cuts, fishmeal, and oil. V-cuts, guts, and fishmeal raw-material allowed for in the conversion factor for "filets without bones".

Ship ....."Österreich"..... Trip from .....11.4.....to .....20.7.....1972

FRG 4

Fishing ground	April				May				June						July		Total
	G-SE	1E	1C	1D	1D	1E	G-SE	1F	1D	I-NW	I-NW	Finm.	Murman	Lofot	Lofot		
Herring																	
Mackerel																	
Cod	1380	40	280	1190	150	1350	6410	1080	350	100	1400	4940	100	100	60		18930
Haddock												770	50	40	170		1030
Whiting																	
Saithe										700	380	730	50	40	5660		7560
Ling																	
Blue Ling																	
Hake																	
Torsk																	
Redfish	630	50	80			190	650		80						60		1740
Catfish					100			50	130	30	160				30		500
Monk																	
Witch																	
Lemon Sole																	
Megrim																	
Halibut																	
Greenl.Halibut																	
Skates																	
Spur Dog																	
Other Sharks																	
(Fishmeal)																	
(Oil)																	
.....																	
Others																	
Total	2010	90	360	1190	250	1540	7060	1130	560	830	1940	6440	200	180	5980		29760
For fish-meal																	
Herring																	
Cod	15			30		70	135	30	20		40	90			120		550
Redfish	40		10	20	10	30	40				10	50			20		230
Others	85		10	40	20	80	275	130	40	10	70	310	30		310		1410
.....																	
Total	140		20	90	30	180	450	160	60	10	120	450	30		450		2190
Discarded																	
Herring																	
Cod																	
Redfish																	
.....																	
.....																	
Total																	
Trip days																	
Fishing days	8	2	1	3	2	6	15	5	2	1	5	14	1	1	15		81
Fishing hours	45	6	12	33	22	64	98	26	20	20	77	252	9	13	273		970
Type of net	bottom	bottom	bottom	bottom	bottom	bottom	bottom	bottom	bottom	pel.	bottom	pel.	pel.	pel.	bottom		

Ship ..."Österreich"..... Trip from ....11.4.....to .....20.7.....1972

Fishing ground	Total		April					May				June					July
			G-SE	1E	1C	1L	1D	1E	G-SE	1F	1D	I-NW	I-NW	Finm.	Murman	Lofot	Lofot
Herring																	
Mackerel																	
Cod	935624		68207	1977	13839	58816	7414	66724	316817	53379	17298	4943	69196	244162	4943	4943	2966
Haddock	21990													16439	1067	854	3630
Whiting																	
Saithe	300002											27778	15079	28968	1984	1587	224606
Ling	603																603
Blue Ling																	
Hake																	
Torsk																	
Redfish	97832		35422	2811	4498			10683	36546		4498						3374
Catfish	19424					3885				1942	5050	1165	6216				1166
Monk																	
Witch																	
Lemon Sole																	
Megrim																	
Halibut	263					50		14	62	10			17	57			53
Greenl.Halibut	1162						1162										
Skates																	
Spur Dog																	
Other Sharks	2100		2100														
(Fishmeal)	(174255)																
(Oil)																	
.....																	
Others	749		51	2	9	30	6	39	178	28	14	21	49	162	5	5	150
Total	1379749		105780	4790	18346	62781	8582	77460	353603	55359	26860	33907	90557	289788	7999	7389	236548
For fish-meal																	
Herring																	
Cod	27500		750			1500		3500	6750	1500	1000		2000	4500			6000
Redfish	11500		2000		500	1000	500	1500	2000				500	2500			1000
Others	70500		4250		500	2000	1000	4000	13750	6500	2000	500	3500	15500	1500		15500
.....																	
Total	109500		7000		1000	4500	1500	9000	22500	8000	3000	500	6000	22500	1500		22500
Discarded																	
Herring																	
Cod																	
Redfish																	
.....																	
.....																	
Total																	
Trip days	100																
Fishing days	81		8	2	1	3	2	6	15	5	2	1	5	14	1	1	15
Fishing hours	970		45	6	12	33	22	64	98	28	20	20	77	252	9	13	273
Type of net			bottom	bottom	bottom	bottom	bottom	bottom	bottom	bottom	bottom	pel.	bottom	pel.	pel.	pel.	bottom

FRG 5

Brief Outline of France (Metropolitan) Statistical System

The French statistical system for marine fisheries is based on 3 subsystems - catches by fishing area, landings (quantity and value), and distribution and transformation of fishery products - which are interfaced with the catching units (ships) and the market prices for the products.

1. Catches

For vessels making trips of 3 to 4 months, data are recorded in log-books on a daily basis. For smaller vessels, data are collected on a trip by trip basis. The results are compared with the landings in order to correct the first evaluation of catch by fishing area and fishing day.

2. Landings

The quantities of each species landed are collected in the harbour with information on the product (frozen, salted, fresh, etc.) and the market conditions. The total nominal weight is obtained and this can be used to correct the catches.

3. Distribution and Transformation

Information on these parameters are difficult to collect but are useful to understand the market. For coding, three files are used: species and products, vessel characteristics, and fishing gears.

Data are collected by administrative officers and scientists. Material for estimating conversion factors for the various products are treated in the harbour or in a laboratory, and sent to a central office where they are used by fishing administrators to compile the final statistics for use nationally and by international organizations.

System for Collecting and Processing Fishery Statistics in Saint-Pierre et Miquelon

Submitted by

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Saint-Pierre et Miquelon

A. Offshore Fishery

1. Base documents

a) Fishing trip report (see Annex 1)

Information recorded set by set for each vessel per trip include
- position of set, NAFO division
- depth, nature of bottom sediments
- set duration
- species by species estimates of catches.

b) Landing entries form

This form provided by the fish plant for each boat per trip gives the weight in kg of the landed species.

c) Landed weight/live weight conversion factors

These factors permit the calculation of the round weight of each species from their landed weight (e.g. gutted, headon for cod, fins for skates, etc.).

2. Processing of data

a) Fishing effort

For each fishing trip report, the fishing effort (in hours and days) is determined per month, division, fishing gear (pelagic or bottom trawl) and principal species sought for (cod, redfish, flounders, etc.).

b) Catches

The landed weights (from landing entries form) for each species are determined per month, division, gear type and principal species sought proportionally to the catch estimates given in the fishing trip report. If there is no estimate (as for species caught in small quantities) the quantities are proportioned according to the effort.

The round weights are obtained by applying the appropriate conversion factors to the landed weights in kg, before summing the monthly data by month, division, gear type, etc. These are then rounded to the nearest metric ton.

B. Inshore Fishery

1. Basic documents

These include for each day the number of dories with landings, landing entries from the fish plant at St. Pierre and monthly production from Miquelon, and landed weight/live weight conversion factors.

2. Data processing

a) Fishing effort

The number of dory landings in each month is multiplied by 8 to obtain hours fished, it being assumed that each fished about 8 hours per day.

b) Catches

Landing entries from the fish plant are adjusted to round weight by the application of the appropriate conversion factors for each species.

Conversion factors used for fisheries statistics up to 1979.

	Français	Anglais	Nom scienti.	Etat au débarquement	Coeff. convers.
	Morue	Cod	Gadus morhua morhua	piquée	1, 19
	Anon	Haddock	Melanogrammus aeglefinus	piqué	1, 85
	Balai	American plaice	Hippoglossoi-des pl. pl.	rond(sans queue)	1 ,00
	Rouget	Redfish	Sebastes marinus m.	rond	1, 00
	Merlu	Pollock	Pollachius virens	piqué	1, 24
	Sole	Witch Grey sole	Glyptocephalus cynoglossus	piqué	1, 00
	Flétan	Halibut	Hippoglossus hippoglossus	piqué	1, 15
	Chat	Wolffish	Anarhichas spp.	piqué	1, 20
	Raie	Skate	Raja spp.	en ailes	2, 93
	Carrelet	Yellowtail flounder	Limanda ferrugines	rond	1, 00
	Lotte	Angler Monkfish	Lophius americanus	en queue	3, 25
	Maquereau	Mackerel	Scomber scombus	rond	1, 00
	Capelan	Capelin	Mallotus v. villosus	rond	1, 00

FICHE DE MARÉE

Date et heure de départ : ....

Date et heure d'arrivée : ....

Nom du Chalutier : ....

Capitaine : ....

Chalut utilisé : ....

DATE	Mouvements navire heures de :			Traicts successifs :								Apports évalués du traict en livres (poisson entier non vidé)																							
							Position					MORUE		BALAI American Place		CARRELET Yellowtaile		ROUGET Sebaste		ANON		RAIE		GREY SOLE		FLETAN		LOTTE		CHAY		MERLU (lieu noir)			
	Route	Cape	Pêche	Traict Nº	Durée	Vent	Lat. N.	Long. W.	Secteur ICNAF	Heure fond	Profond (brasses)	mis en cale	rejet	mis en cale	rejet	mis en cale	rejet	mis en cale	rejet	mis en cale	rejet	mis en cale	rejet	mis en cale	rejet	mis en cale	rejet	mis en cale	rejet	mis en cale	rejet	mis en cale	rejet	mis en cale	rejet

APPENDIX VI

Statistical System Used for Collecting and Processing Northwest Atlantic Fishery Statistics in the German Democratic Republic

Submitted by

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The sea fisheries of the German Democratic Republic consist of nationally-controlled fishing activity and cooperative fisheries where the latter are only engaged in near-water fishing. The overall responsibility for the provision of fishery statistical data is vested in the VEB Fischkombinat Rostock. The catch data of the nationally-owned fishing vessels are reported daily by radio to the fishing enterprises, to the VEB Fischkombinat Rostock, and to the Institute for Deep Sea Fisheries. A preliminary analysis is carried out daily for actual management requirements and for quota control by the enterprises and by the VEB Fischkombinat Rostock.

The enterprises prepare the data for automatic data-processing (ADP) treatment and process the computer-based data bank. The Institute for Deep Sea Fisheries summarizes the data for national fishery statistics and prepares the data sheets for international exchange.

The sources of the primary data are the daily catches recorded in the fishing logbook and production records of the landings. The following input data are collected for ADP treatment of fishery statistics:

- name of vessel
- year, month and day
- area, subarea and division
- general position of the catch
- gear used
- catch by species and the purpose (human consumption, fish meal, discards)
- number of hauls
- number of fishing hours
- causes of no fishing for classification of "days on ground" and "days absent from port"
- quantity of daily preserved and processed fishery products onboard.

Onboard the fishing vessel, the quantity of catch per haul by species is estimated and immediately recorded in the fishing logbook. These estimates are rectified daily be recalculation of the nominal catch from the quantity of daily produced products by means of nationally-authorized conversion factors, and from the species composition of possible whole fish going to the fishmeal plant (only a very small portion of the catch) and the estimated quantity of discarded fish are also taken into account.

The veracity of the data is checked by different methods:

a) Control of the correctness of the entries in the fishing logbook by national inspectors and by the master in overall command of the fleet; and

b) Comparison between reported nominal catch and the recalculated live weight of the landed fishery products, and the monthly rectification of the computer-based data bank.

APPENDIX VII

Description of the Norwegian System of Collecting and Processing Fisheries Statistics*

by

Directorate of Fisheries
Bergen, Norway

The Norwegian Directorate of Fisheries is responsible for the collection and processing of the national fisheries statistics.

The system of collecting and processing fisheries statistics in Norway is in a continous process of refinement and adjustment in accordance with changing needs for statistical information.

Different methods of collecting the basic statistics are used, depending on the needs for information in each particular fishery.

The following discription is limited to the collection and processing of fisheries statistics from the Northwest Atlantic fisheries.

Norwegian vessels participate in long-lining, gill netting and trawling mainly for cod, further in shrimp trawling, capelin fishery by purse seiners and midwater trawlers, and finally in seal fishery in the Canadian economic zone. The last couple of years only long liners have been used in the cod fisheries.

Except for the seal fishery, the official Norwegian fisheries statistics are based upon information from fishing logbooks and sales contracts. First this system will be described in some detail. Then the method of collecting statistics from the seal fishery will be described.

I. Fisheries Statistics.

a) Fishing Logbook.

All vessels fishing for cod, shrimp and capelin in the area concerned are required to keep a fishing logbook during the period of operation. Each page has a copy sheet. Enteries shall be made for each setting or haul, giving information about date, time and geographical position. The catches shall be specified by species, and discarded catch should be recorded (normally there is no discards in the longline fishery).

Copies and English translations of the logbooks used by the Norwegian vessels in 1975 were printed in ICNAF Working Paper No. 22 circulated at ICNAF's 25th. Annual Meeting. The logbooks in use today are slightly modified. For instance, the new edition of the logbook for longliners contains the numerical codes for column and species indentification as recomended by ICNAF's Plenary on 20th. June 1975.

The fishermen are required to send the copy sheets of the logbook to the Directorate of Fisheries immediatly upon arrival from the fishing ground.

b) Landed Quantity.

According to Norwegian law the fishermen's sales organisations have the sole right to all first-hand sales of fish. The organizations require that a special form (actually a sales contract) is filled out jointly by the fishermen and the buyer when a catch is landed. The form is sent to the sales organization concerned, for use in its sales functions. The completed form contains, among other things, the registration number of the vessel, the place and date of landing, the exact quantity landed, the price and first-hand value of each species, disposition of the catch, type of gear, number of men on board and fishing area.

The information in the sales contract forms the basis for the Norwegian total catch statistics. Thus, a copy of the sales contract, or a special form containing the sales contract information, is sent to the Directorate for statistical purposes.

c) Processing of the Statistics.

The Norwegian fisheries statistics are based on complete information, not on samples. At the Directorate of Fisheries the information from the logbooks and the sales contracts are processed by computers. For each species the ADP programs convert the total catch (product weight) from the sales contract into live weight, and distribute it among fishing areas and over time in accordance with the specifications in the logbooks. Through this process the quantities caught in each area during each period of time are connected to effort measures from the logbooks. The most detailed effort measures are "1.000 hooks fished" for the longliners, "hours fished" for the trawlers, and "number of hauls" for the purse seiners.

This processing also permits completion of Statlant 21 B by computer.

II. Seal statistics.

Statistics from the Norwegian seal fishery in the ICNAF area are based on custom clearance forms which are filled out at the vessel's return to Norwegian port. The forms,

which specify the catches on species and age groups, are sent by the custom officials to the Directorate where the information is processed manually.

III. Collection of statistics for the purpose of quota control.

In addition to the collection of statistics outlined above Norwegian vessels report catches from the fishing ground to the Directorate of Fisheries at regular intervals. The purpose is to follow the development in the total catch quantity for each species during the fishing season and prevent that the Norwegian quotas are exceeded.

APPENDIX VIII

System Used for Collecting and Processing Statistical Information Regarding the Polish Sea Fisheries

Submitted by

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The system of collecting and processing of statistical data, used presently in the Polish Sea fishery as regards the size of catch and fishing effort of the deepsea fishing fleet, was introduced in the 1960's. The system is a 2-step structure based on the following components:

a) Daily reports of the fishing vessels are sent by radio to the ship-owners; and

b) Monthly accounting of the fishing effort calculated on the basis of the periodical reports of the fish processing technologist of the vessel.

The daily reports dispatched by the captain of the fishing vessel contains the estimated quantity and species composition of the catch as a whole as well as data on fishing effort and area of capture. In addition to being sent to the ship-owner, this report is dispatched also to the Fisheries Central Board and the Sea Fisheries Institute, Gdynia, so that the information can be used for operational fish scouting.

A detailed accounting of the catches obtained from the fishing vessels is prepared on the basis of the periodical reports of the fish-processing technologist, taking into account technological coefficients of conversion to round fresh weight. This accounting is made on special forms and contains the following monthly information:

a) Type of fishing vessel and fishing gear used;

b) Size of catch and its composition;

c) Amount of fishing effort - days at sea, days on the fishing ground, days fished, and hours of trawling; and

d) Localization of the place of fishing and the fishing effort in the divisions and regions of a given statistical area projected on the FAO statistical grid.

These forms are completed by every deepsea fishing enterprize and are then transmitted to the Fisheries Central Board and the Sea Fisheries Institute. The results of the activity of the fishing fleet, compiled on the above-mentioned forms, constitute the final source of information on fishing and fishing effort of the Polish deepsea fishing fleet, and are used for internal reporting on the fishing industry and to prepare materials for international organizations.

As to the statistical data required by these international organizations from member states, until 1974 they were limited in principle to an obligatory procurement of yearly reports on fishing and fishing effort within the framework of the STATLANT program. Since 1975, growing requirements of some of the organizations resulted in the necessity for member states to provide monthly information on fishing activity in regions and on stocks where conservation measures have been imposed. Consequently, the previous system of reporting annually by subareas and divisions became insufficient. In this connection, work was undertaken to modernize the system of collecting statistical data.

The Sea Fisheries Institute, in close cooperation with the Polish administrative authorities for fisheries worked out a new type of logbook for all vessels of the deepsea fishing fleet. This document provides the sole source of the primary information on the activity of the Polish fishing fleet. It has been arranged so that the data therein can be processed by computer and thus provide highly precise and detailed information on the localization of fishing and fishing effort of the Polish fleet.

The new ship's logbook has been supplied to every vessel of the deepsea fishing fleet. Abstracts from the logbook (daily 24-hour reports) are sent by radio to the ship's owner, and to the Sea Fisheries Institute. The portion of the ship's logbook containing all relevant information about the fishing activity serve as the basic statistical source of data, and

copies are sent to the Sea Fisheries Institute for biostatistical research.

As to Polish fishing activity in the Baltic Sea, data on nominal catch and fishing effort are gathered in 2 stages: daily reports of the vessels if they are provided with adequate technical facilities, and monthly reports based on the data obtained during unloading of the catch. Similarly, as in the case of the deepsea fleet, a new type of logbook has been prepared for the Baltic Sea fleet. Its layout resembles the deepsea fishing logbook, but it has been modified according to the specific needs of the type of fishing in this region. This logbook was distributed to fishing vessels during 1980.

In the past years (1979-80) intensive work has been carried out at the Sea Fisheries Institute on the basic computer program (MIRYB) for biological data, and a preliminary draft of the MIRYB system has been completed. This system is to insure the broadest possible utilization of the data for research purposes. In particular, it provides for the storage of vast amounts of data for extended periods, the maintenance of logical links between different data sets, and ready access to any of the possible logic interrelations.

The data bank will be in the memory of the ICL 1900 computed at the Fisheries Data Centre. Input, control and preliminary processing of the data will be done by the Sea Fisheries Institute by means of a DATAPOINT 2200 mini-computer, with direct linkage to the ICL 1900 computer. The data bank will store data gathered by the ELLIOT 905 computer installed on the research vessel *Profesor Siedlecki*. The programming will be structured on the system of relating data bases with the highest possible degree of automation so that the system can be used directly without the necessity of defining the process in the computer's language. The processing will be controlled with the use of GEORGE-3 system.

Data stored and processed will refer to five fields of research - industrial fisheries, ichthyology and fishery, planktology, hydrology, and hydroacoustics for use of the fishery. The results of the research will be registered and entered into the data system on 23 basic input data files. In addition, there will be files setting up and updating the data of constant character.

The total number of items to be found in the input files and the system will be about 220, of which each will contain different information on the research results. The presently envisaged total of the input data stream from all fields will amount to about 3.8 million recordings each year.

The data of constant character comprise: classification of fishing areas, data concerning fishing vessels, and names and codes of fish species and plankton. Apart from large aggregates, there will be smaller ones, among them the names and codes for fishing gears and their characteristics, names and codes for production utilities, codes and descriptions of hydrological phenomena. Most of the codes and classificiations will be based on the standards prepared by FAO, ICES, WHO, etc., in order to facilitate the exchange of information with international fishery organizations.

APPENDIX IX

USSR Procedure for Collecting and Processing Fishery Statistics for the Northwest Atlantic

Submitted by

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1. Collection of Statistical Data

Record is kept of the daily fishing results of all vessels. The recorded data are corrected by the actual landings of fish products at the ports. The source of the initial data is the standard radio message transmitted daily to the respective radio center of the fishing enterprise by each vessel involved in fishing. The radio message of the large fishing vessels is based on the fishing and fish-processing logs which contain data on catch and on the assortment of fish products. The middle-sized vessels, which deliver the catch to factory ships provide their data upon the receipt of confirmation from the factory ship of the amounts of assorted fish received. The reason for this is that the catches of these middle-sized vessels are assessed only roughly, whereas the quantities are actually weighed on the factory ship as the fish are being received.

The automated system of collecting, processing, storing and presenting statistical data from the fishing operations in the Northwest Atlantic has the following elements:

- collection and primary processing of radio messages at radio centers of the local fishing boards, and delivery of these data to the respective computer centers;
- processing of radio messages at the computer centers to build up archives of fishing information for exchange between data banks; and
- establishment of the Central Archive of fishing information by way of its regular connection with the exchange banks.

2. Collection of Data on Catch Location by Fishing Areas

The major source of data on the location of catch by areas is the combined daily messages grouped by coordinates indicated in these messages. In the case of scientific exploratory, research, and experimental fishing, fishing logs of the vessels are used.

3. Determination of Time Fished

The time on grounds and time fished is recorded in vessel/days, the time of trawling in hours.

- Time on grounds is the number of days (24 hours between midnights) when the vessel was in the zone of the fishery except the days spent for fishing and fish-scouting.
- Time fished is the number of days (24 hours between midnights) when the vessel was in the zone of the fishery with the intention to catch fish (discounting the time spent moving from one fishing ground to another, from port to fishing grounds, etc.) minus the number of days on the grounds lost because of weather, breakdowns and other problems.

4. Extent of Coverage of Statistical Information

The daily information on fishing and the corrections made in the summary record after the fish production is delivered to the ports provide for full coverage of the landings.

5. Fishing Statistics Sent to NAFO: Schedule of Presentation

a) Tentative USSR catch statistics by stocks monthly as required.
b) Yearly catch statistics on STATLANT 21A by April 15 of the year following the year of capture.
c) Monthly catch and effort statistics on STATLANT 21B by June 30 of the year following the year of capture.

Fish Landing Records at Ports in England and Wales: a Description of the New Forms Introduced in January 1972*

The replacement in 1969 of the Ministry's Elliot 803 computer (used to process fish landing data since 1964) by an ICL 1907, a 96K computer with magnetic tape, disc and fast printer peripherals, provided an opportunity to redesign the form completed by port collectors of landing statistics. The principal form in use from 1954 was the form F-1 (ENG 1) and in 1965 the form F-45 (ENG 2) was introduced at some ports but for herring landings only. About 30 000 forms covering roughly 80 000 landings would be submitted in a full year.

Landings may be recorded as one of three types:

(a) a single landing by a single vessel

(b) a combination of two or more landings made by a single vessel

(c) a combination of landings by two or more vessels fishing independently.

Landings of vessels over 60 feet in length would almost invariably be recorded as type (a), and below this size, to 40 feet in length, as either type (a) or (b). In general, only landings by vessels under 40 feet in length would be permitted as type (c), but all shellfish landings and some pelagic landings would be accepted if returned in this way.

The Ministry employs full-time collectors of statistics at North Shields, Hull, Grimsby, Lowestoft, Brixham, Milford Haven and Fleetwood, and at these ports landing type (a) records would be completed. At the remaining landing ports in England and Wales, where part-time collectors are employed, landing types (b) and (c) are normally returned.

With the increasing sophistication in the techniques of population dynamics, the deficiencies of the F-1 form became ever more apparent; chief among these were the inability to input to the computer more than the one ('main') ground fished, and details of trawled but unmarketable fish returned to the sea ('rejected'). Information on the additional ground(s) fished has been obtained by the full-time collectors whenever possible (landing details are provided to collectors by skippers or mates, on a voluntary basis only) and written on an unused part of the F-1 form, usually with no details of fishing effort. These data were not suitable as input to the computer and required hand-processing at a later stage. Details of the fish rejected at sea were obtained as an additional return sent directly to the Lowestoft laboratory. Grimsby and Lowestoft were two ports requested to supply this information regularly and the exercise was extended to Hull where a return was completed by cooperative skippers. A separate return, the F-20 (ENG 3), had also to be completed at each of the major ports and sent to MAFF, London, giving details of landed fish disposed of other than by normal market sale ('other disposals', e.g. condemned or sold as animal foodstuffs) during each calendar month. The data on extra grounds and rejection would have been available for landing of type (a) almost exclusively, and generally so for the 'other disposals' return.

These were the main considerations taken into account when the forms to replace the F-1, F-45 and F-20 were designed. Additionally, the programming and data conversion requirements had to be given due attention, but a more basic objective was to ensure that both the full- and part-time collectors were supplied with a form which would be as easy, or easier, to use as before and one which, though able to accept the minimal data that were required for the F-1 form, would be able to contain all the additional information that could be made available to any collector.

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* Extract from ICES Coop. Res. Rep. No. 91, pages 25-27, 128-133.

The H-1 form (ENG 4) has every facility for recording the additional details described above. The form is divided into six sections (A to F) and a brief description of each section follows:

Section A identifies the port of landing, the vessel making the landing, its nationality (coded), together with the date of landing, the length of the voyage in days and an indication of the number of grounds which were fished AND for which information is entered on the form in the following section. Up to four different grounds can be listed on one form, and additional forms can be used to include more than this - a situation frequently applicable to landings by factory/freezer vessels.

Section B enables up to four separate fishing grounds to be described and located by code to an area approximately 30 nautical miles square (a 'rectangle') for near- and middle-water catches; the distant-water grounds are recorded in larger and variably sized areas (sub-regions). Details of the fishing effort on each ground can be entered, but if this information is not available the total effort data for the voyage must be given. The 'method of capture' is a coded item which can also serve to inform the computer to expect an entry in Section D (examples of codes: 02 = pair trawling, bottom trawl, 12 = pair trawling, mid-water trawl) where the identity of the second vessel will be given. Section B closes with a line of entry which indicates whether rejection information is or is not available for the ground in question or that rejection did not occur.

Section C has a dual function: to record the identity and quantities of each of the main species (a) rejected at sea and (b) taken on each of the grounds fished. Rejection data are linked to the last line of entry in Section B, and both (a) and (b) entries may be given on the same form. The fish species is entered as a code which is a mnemonic of the popular name of the fish (eg COnger Eels = COE) but the additional code ALL may be used only in Section C, to indicate that all the species landed were taken in the proportions entered. The unit of quantity used in this section can be selected by the Collector - the same unit must be used in each 'rejected' column or in each 'estimated quantity landed' column.

Section D has already been mentioned in Section B in connection with the method of capture code. It is similar to the vessel identity line in Section A, with provision for up to three additional boats working in partnership.

Section E, on the reverse side of the form, accepts details of 'other disposals' which are to be entered in the appropriate sub-sections. The species code is entered, together with the quantity and value. The unit of quantity in this section is hundredweights (cwt) and the value is in pounds sterling (£).

Section F takes details of the total landing entered in the same manner as in Section E and including any entries in that Section. A code is entered to indicate frozen fish, filleted fish and so on landed by factory/freezer trawlers.

The detailed computer processing system is not described here but, in brief, a set of prescribed tabulations is produced from landings made during each calendar month and at the end of each year from all the landings made during that year. Each landing will be held as a permanent record on magnetic tape, to be available for ad hoc enquiries or future analysis. The landings from 1941 to 1971 are also being written to magnetic tape, to provide a continuous data bank covering 30 years which will be automatically extended each year.

To support the processing of the H-forms and for use with the 'historic' data, a computer file of all the currently registered fishing vessels, together with fishing vessels registered in and from 1944, has been created on magnetic tape. Vessels of all sizes are included, and though a record at present only contains the minimum data required for processing H-forms (i.e. registered length and gross tonnage) this can be expanded to include other technical details (e.g. engine power), and it is anticipated that this will be done in the near near future.

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD

(Return of Fish landed) Serial No. CODE ONLY ENG 1

Registered Letter and No.

Name of Vessel	Day	1	
	Month and Year	2	
	Port	3	
Particulars of main fishing ground	Nationality of Vessel	4	
	Vessel No.	5	
	Gross Tonnage	6	
Other fishing grounds	Registered Length	7	
	Method of Propulsion	8	
	Method of Capture	9	
No. of lines or drift nets	Region	10	
	Rectangle	11	
No. of hauls	No. of Hours Fishing	12	
	No. of Days Absent	13	
Average duration of haul	No. of Voyages	14	

		Code	Cwt.	£
Bream		1		
Brill	Large	2		
	Small	3		
	Unsorted	4		
Catfish		5		
Cod	Large	6		
	Medium	7		
	Small	8		
	Unsorted	9		
Conger Eels		10		
Dabs, Long Rough		11		
Dabs, other		12		
Dogfish		13		
Dory		14		
Eels		15		
Flounders or Flukes		16		
Gurnards and Latchets		17		
Haddock	Large	18		
	Medium	19		
	Small	20		
	Unsorted	21		
Hake	Large	22		
	Medium	23		
	Small	24		
	Unsorted	25		
Halibut	Large	26		
	Medium	27		
	Small	28		
	Unsorted	29		
Lemon Soles	Large	30		
	Small	31		
	Unsorted	32		
Ling		33		

ENG 1 (ctd)

		Code	Cwt.	£
Megrims	Large	34		
	Small	35		
	Unsorted	36		
Monks or Anglers		37		
Mullet, Grey		38		
Mullet, Red		39		
Plaice	Large	40		
	Medium	41		
	Small	42		
	Unsorted	43		
Pollock		44		
Redfish		45		
Saithe (Coalfish)		46		
Skates and Rays		47		
Soles	Large	48		
	Medium	49		
	Small	50		
	Unsorted	51		
Torsk (Tusk)		52		
Turbot	Large	53		
	Small	54		
	Unsorted	55		
Whiting		56		
Witches	Large	57		
	Small	58		
	Unsorted	59		
Livers Raw		60		
Liver Oils		61		
Roes		62		
All other		63		
Total Demersal		0		
Herrings		64		
Mackerel		65		
Pilchards		66		
Sprats		67		
Horse Mackerel		68		
Silver Smelt (Sparling)		69		
Whitebait		70		
Total Wet Fish		0		
Crabs		71		
Crawfish		72		
Lobsters		73		
Nephrops		74		
Prawns		75		
Shrimps		76		
Cockles		77		
Escallops and Queens		78		
Mussels		79		
Periwinkles		80		
Whelks		81		
Squids		82		
Oysters (Hundreds)	Native	83		
	Mixed	84		
	Portuguese	85		
Total Value		0		

Remarks:

For A.A. & D.P.D. use only | 4 (

ENG 2

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD

LANDINGS OF PELAGIC FISH

	CODE ONLY	
Day	1	
Month and Year	2	
Port	3	
Nationality of Vessel	4	
Registered Length	5	
Method of Propulsion	6	
Method of Capture	7	
Region	8	
Species	9	
Serial No. (For Ministry Use only)	10	

Registered Letter and No.	Position	English/Scottish/Others (1)	RECTANGLE (2)	Sub-rectangle (3)	CATCH (crans) Fresh (4)	ICED 1 Night (5)	ICED 2 Nights (6)	ICED 3 (+) Nights (7)	EFFORT No. of drift nets *or* Hours fishing (trawl) *or* No. of shots (ring nets) (8)	REMARKS

Quality:

Weather:

PORT SUMMARY		crans (1)	£ (2)	No. of arrivals (3)
English	-1			
Scottish				
Others				
TOTAL				

Form F.45

C.P.C95363. D18150. 100bks. 11/66. G.p.78

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD

MONTHLY RETURN OF QUANTITY AND VALUE OF WHITEFISH EDIBLE BUT UNSOLD, CONDEMNED, SOLD FOR ANIMAL FEEDING STUFFS

SALTERS AND FREEZERS

PORT _____ MONTH ENDED _____

Variety of Fish	Edible but unsold				Condemned				Animal Feeding Stuffs				Salters				Freezers	
	British		Foreign		British		Foreign		British		Foreign		British		Foreign		Contract Sales	
	cwt	£	cwt	£	cwt	£	cwt	£	cwt	£	cwt	£	cwt	£	cwt	£	cwt	£
Catfish																		
Cod																		
Dabs, L/R																		
Dabs, Other																		
Dogfish																		
Gurnards/Latchets																		
Haddock																		
Halibut																		
Lemon Soles																		
Ling																		
Megrims																		
Plaice																		
Redfish																		
Saithe																		
Skates/Rays																		
Whiting																		
Witches																		
Fish Roes																		
Other Demersal																		
Mackerel																		
Sprats																		
Other Pelagic																		
Industrial Fish																		
Total White Fish																		

FORM F.40 White fish offal sent to meal works (exoluding edible unsold and condemned fish _____ tons.

ENG 4

Ministry of Agriculture Fisheries and Food

Return of fish landed.

Nº 19037 N/L

Section A

Port GRIMSBY 3 0 1 N/L

Name of Vessel N/L

Registered letter and No. and Nationality N/L

Date of landing N/L

Days absent N/L

No. of grounds fished N/L

Section B

Particulars of fishing ground	Main grounds	2nd. ground	3rd. ground	4th. ground
Region	1			
Rectangle	2			
Method of capture	3			
No. of hauls or shots	4			
Av. duration of haul	5			
Days or % of fishing	6			
Rejection	7			

R = Rejection, X = No Rejection, N = No Information

Section C

If only one ground was fished, rejection figures only are required.

Species code	Rejected	est. qty Landed	Rejected	est. qty. Landed	Rejected	est. qty. Landed	Rejected	est. qty. Landed
Unit of qty. Z Z Z								

1 = Kitt 4 = Stones 7 = Numbers 10 = Blocks
2 = % 5 = Cwt. 8 = Lbs. 11 =
3 = Baskets 6 = Crans 9 = Hundreds 12 =

Section D

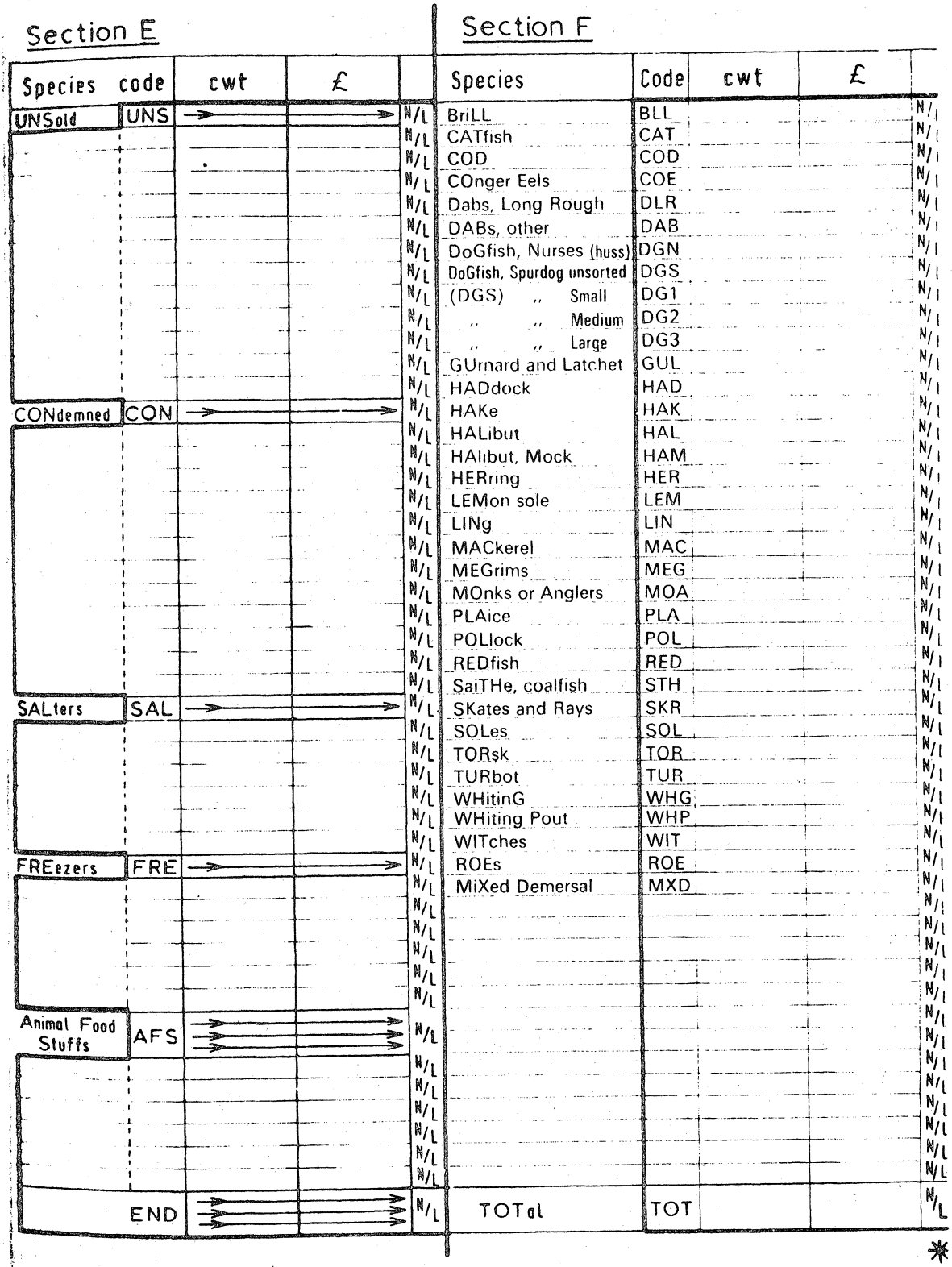
To be completed only for pair fishing
Names of additional vessels

Registered letter & No. Nationality

N/
N/
N/

H-1.1/3.P.1/1.70

ENG 4 (cont'd)



H-1/1 Grimsby