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Summary of Changes in the Fishing Fleets working in the Convention Area, 1953-1959

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Following recommendations from the Annual Meetings, the member countries have reported data on their fishing vessels over 50 tons working in the ICNAF area every third year. The data include type of vessel (and gear), numbers of vessels and tonnage; further detailed information on the equipment of the individual vessels. These data have been compiled in the Secretariat and circulated as "Lists of Fishing Vessels". The first issue of this list was for the year 1953 (for this list a few countries reported data for 1952 or 1954 - in this paper such data are considered applicable to 1953); the second list is for 1956 and the third list for 1959. Material from these three lists is used in the following paper, which is an attempt to present the main changes in the fishing fleets over the years in question. The paper is only concerned with the following data: type of vessel (gear), number of vessels and tonnage.

Review of Classification of Vessels

At the 1954 Annual Meeting the Commission adopted the following recommendation of the Standing Committee on Research and Statistics:

"That the following classification of fishing vessels be used in submitting statistical reports:

Otter Trawlers, Long Liners and Dory Schooners:

Group 1: 50 gross tons and under

" 2: 51-150 gross tons

" 3: 151-500 gross tons

" 4: 501-900 gross tons

" 5: over 900 gross tons

"That the countries be asked to supply every three years a list of their vessels fishing in the Convention Area to keep the Commission records up to date and to furnish a basis for reviewing the classification of vessels used in submitting statistics."

The first half of the latter paragraph of the recommendation has been met by the preparation and distribution of the three above-mentioned lists, but a review of the classification based on the collected data has not been undertaken. The present summary, therefore, begins with such a review.

The reporting for the years 1956 and 1959 does not include the lowest category - 50 tons and under; an upper limit to the fifth group has been set - 901 to 1800. The present reporting therefore is by the following groups:

1. 51-150 gross tons
2. 151-500 " "
3. 501-900 " "
4. 901-1800 " "
5. 1801 gross tons and over

In the recently distributed list for 1959, Tables 6 and 7 provide a summary by much smaller categories for the various types of vessel used in 1959. These tables are not reproduced here but similar tables for the years 1953 and 1956 are given (Tables 1-4). Figure 1 is prepared for otter trawlers and liners + dory vessels, based on the data in these six tables. It is to be noted that the scale used in the tables and in the figure, for the finer subdivision into tonnage-classes, is gliding for the smaller vessels a 10-ton grouping is used, for the larger and largest 20, 50, 100 and 500-ton grouping. The bold vertical lines indicate the limits of the tonnage classes as established by the Commission.

It is felt that the proper grouping of vessels should be so that the limits of the various groups meet the troughs in the tonnage-distribution curve, with the peaks falling well apart from the limits.

From the figure, both the panel for otter trawlers and that for liners + dories, it is apparent that the lower limit for the first class and the limit between the first and the second class (51 and 151 tons) do not conform with this demand; they both fall on or very near a peak in the distribution curve. The 51-limit falls at a steep decrease in numbers, reaching its lowest value at 71 for liners and at 91 for trawlers. For 1953 Canada and U.S.A. have also submitted figures for the 50 tons and under group. The following figures for trawlers of both countries show that the peak from which the numbers decrease to the trough at 71-91 is in the 11-40 tons class:

Tons class:										
Tonnage	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
No. of trawlers	56	171	138	134	84	44	34	39	20	12

This means that our lowest class includes the upper part of the very large number of the smallest trawlers with the peak around 11-40 tons.

The next limit, 150 tons, falls very near a peak both for liners and for trawlers, a peak which is formed between two troughs, one about 100, another about 200 tons.

The following limits between tonnage-classes: 500, 900 and 1800, appear as fairly satisfactory, coinciding with troughs in the distribution curve, and the intermediary peaks are close to the middle of the range of each tonnage-class.

Figures 2 and 8a show the size distribution of the two remaining larger groups of fishing vessels, the Canadian and U.S. scallop draggers (only reported for 1956 and 1959) and the Spanish pair trawlers. It is apparent from the curve that a part of the smallest scallop draggers are cut off by the 50 tons limit; the upper limit for size of scallop dragger coincides fairly well with the 150 tons limit.

The pair trawlers range from 120-380 tons. As very few are below 150 tons, the tonnage-class 151-500 conforms fairly well with the size-distribution of pair trawlers, particularly since there has been a definite trend over the years to increase the size of pair-trawlers, so that it can be expected that in a few years the number of pair-trawlers below 150 tons will be negligible.

From the data illustrated in Figures 1, 2 and 7a, it seems as if a somewhat more "natural" grouping of the smaller sizes of trawlers and liners could be effected by uniting into one group the vessels between 101-200 tons, the stipled lines in the figure. The three lower tonnage-classes would then be:

- 51-100 tons
- 101-200 tons
- 201-500 tons

As the liners and the trawlers do not show quite the same size-distribution, these classes are to a certain degree a compromise to conform as well as possible with both kinds of vessels.

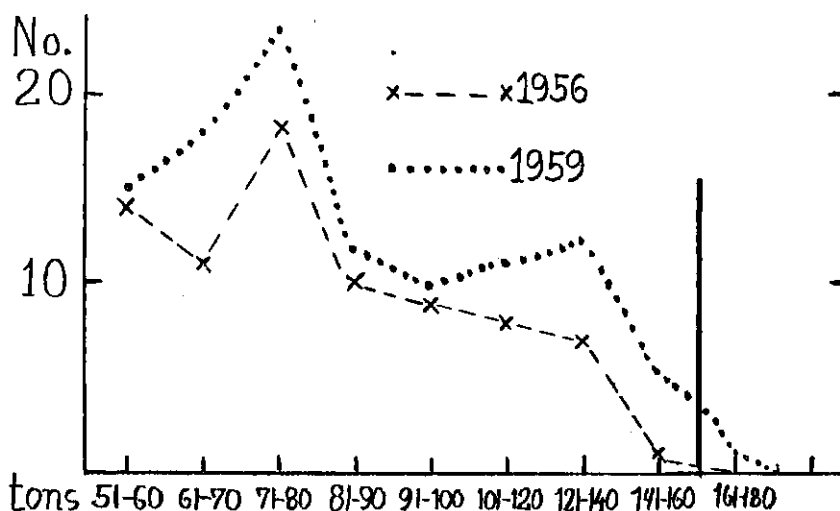


Figure 2 - Canada and U.S.A. Number of scallop draggers, by tonnage classes, 1956 and 1959.

When planning a change like this, there are two problems which must be taken into consideration: (1) Do the sizes of vessels change so much over the years that it is not worthwhile to make such changes, and (2) are the disadvantages caused by the difficulty, or even impossibility, of directly comparing efforts and landings of previous years with those of future years with a changed classification so great that it would be preferable to retain the once established classification.

As to the first question - yearly changes in sizes of vessels, the curves for the three years 1953, 1956 and 1959, show that such changes are rather slight; in certain cases there is a trend towards building larger vessels, e.g. Spanish pair trawlers, Portuguese dory vessels, French otter trawlers (see the following pages). But on the whole such changes are keeping within the same size-classes, and these changes are very small for the smaller size classes that would have to be changed (Canadian and U.S. trawlers). The question of size-changes over the years thus does not offer valid reasons for avoiding a change in the classification.

Far more serious - and perhaps prohibitive - is the other question, that of the comparability of previous data with future data on landings and efforts. A consideration of this difficult problem will not be attempted here.

Changes in the Fishing Fleet, 1953-1959

a. All countries, the whole fleet.

In 1953 ten countries were known to fish in the ICNAF Area, in 1956 twelve countries (addition, Germany and USSR), and in 1959 fifteen (addition, Poland, Belgium and East Germany). The development of the fishing fleets of the twelve "old" countries and the addition of the new countries have caused the following changes in the total of the fishing fleets:

	1953	1956	1959	Increase, No.	%	
Total	No. of vessels	803	867	1,162	45%	
	Tons	297,033	302,626	518,022	74%	
	Tons per 1 vessel	370	349	446	20%	
"old" countr.	No. of vessels	803	801	965	162	20%
	Tons	297,033	262,597	334,768	47,735	17%
	Tons per 1 vessel	370	328	347	-23	-6%
"new" countr.	No. of vessels	-	66	197		
	Tons	-	40,029	183,254		
	Tons per 1 vessel	-	607	930		

The total increase is great, one half more in numbers and three-quarters more in tonnage. By far the larger part of this increase is due to the "new" countries, only one-fifth is accounted for by the old countries. Figure 3 presents the above figures in graphic form.

Although data like these are no direct measure of fishing effort (they do not include the time factor), they indicate a greatly augmented pressure on the fish stocks in the ICNAF Area. However, it is fortunate that a considerable part of this pressure is borne by fish stocks not hitherto seriously exploited - the redfish in Subareas 1, 2 and 3.

The last panel of Figure 3 shows the average number of tons per vessel. Where only the "old" countries are considered a decrease in tonnage has taken place, mainly due to a considerable development of the Canadian fleet of smaller vessels. When all countries are considered, the ton/1 vessel has increased.

b. By vessel categories

Figure 4 shows the changes in numbers of the main categories of vessels through the years.

Where only the "old" countries (those members in 1953) are considered, there is a small decrease in numbers of otter trawlers; this decrease is, however, due to the fact that Canada and U.S.A. have reported their scallop draggers separately since 1956; when these are included there is a small increase, from 560 to 631 - 13%. Where the "new" countries are included, the increase in number of trawlers is very large (the five new fishing fleets which have entered the ICNAF Area are composed only of trawlers), from 560 to 844 trawlers - 51%.

For long liners + hand liners, a considerable increase has occurred, from 101 to 180, or 79%. On the other hand the number of dory vessels has decreased from 75 to 55 vessels, or almost 30%. This is due to a change within the Canadian fleet.

The number of pair-trawlers, used by Spain only, has increased from 63 to 78, or 24%.

Figure 5 presents the changes in the individual size-classes of each category of vessels. For the smallest trawler-class (51-151) there is almost no change; for the other size-classes an increase is observed, largely due to addition of the "new" countries. The "old" countries show some increase in the 151-500 and 901-1800 classes, but a considerable decrease in the 501-900 class.

For the long liners and hand liners, the increase is very large in the 51-150 class, the number being more than doubled; in the 151-500 class the increase is less, about 30%.

For the smaller dory vessels the decrease is large; very few of the 51-150 class remain, and the 151-500 class is reduced to one-third of what it was in 1953. As previously mentioned, this is due to changes in the Canadian fleet. In the 501-900 class, there is a small decrease and in the 901-1800 class a larger increase; this is due to an increase in numbers and in sizes of the Portuguese dory vessels.

c. Changes in the fleets of the individual countries.

In the introduction to the "List of Fishing Vessels 1959", a summary table (Table 2) of the fishing vessels (categories and size classes - numbers and tonnage) by the individual countries is given for the year 1959. Similar tables are given in this paper for the years 1953 and 1956 (Tables 5 and 6). Table 7 shows the corresponding changes from 1953, through 1956, to 1959.

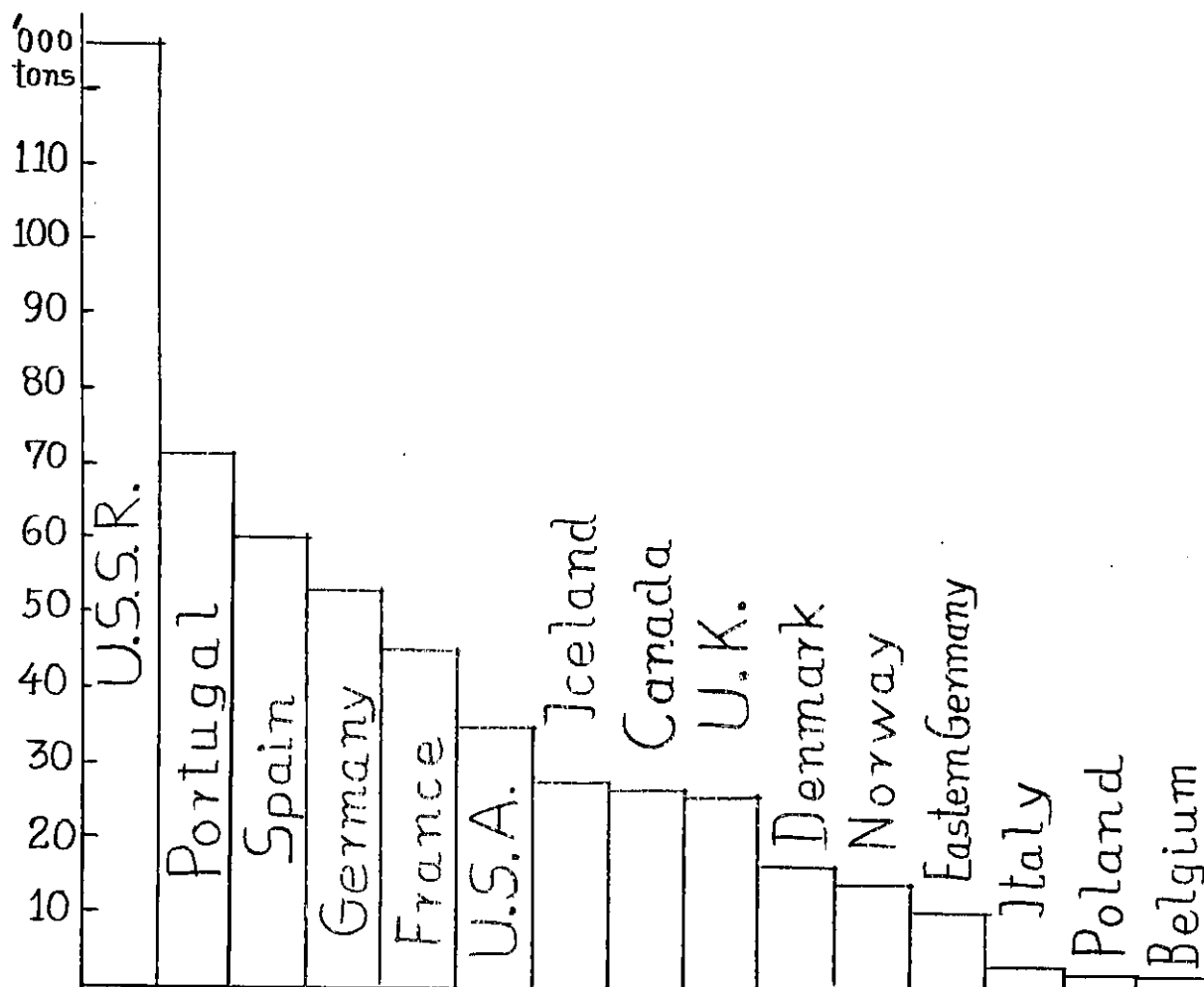


Figure 6 - 1959. Total tons of fishing fleets in the Convention Area, by countries.

Figure 6 shows the total tonnage of the vessels by countries operating in the ICNAF Area in 1959. USSR has by far the largest tonnage of vessels operating in the ICNAF Area, and Portugal and Spain hold second and third place. In considering this figure, it must, of course, be remembered that the total tonnage is no true picture of the effort spent as the European vessels spend much time in travelling to and from the area, and also fish outside the ICNAF Area; it should also be noted that a considerable fishery is carried out by Canada and U.S.A. from vessels below 50 tons - with no equivalent in the European fleets. For these reasons, the total effort and landings of these two countries greatly exceed those of any of the European countries in spite of their fleets (> 50 tons) being smaller than some of the European fleets. This is partly shown in Table 8, which presents a comparison of total landings and total tonnage, both for vessels over 50 tons only. The landings per one vessel ton of the fleets with home ports near the fishing grounds are much higher than those of the other fleets: Canada, France - St. Pierre & Miquelon, and U.S.A. have yields of 6.1, 8.3 and 5.7; Iceland follows with 3.1; Denmark, France - Metropolitan, Norway, Portugal, and Spain have yields between 2.2 and 2.9; Germany, Italy and USSR between 1.5 and 1.7; the remaining countries below 1.1 tons.

The low yield figure for U.K. is obviously due to a low effort, rather short trips (smaller vessels), compared with France, Portugal and Spain. Compared to Germany and Iceland, with trawlers of the same size as U.K., the low U.K. figure, 0.7, is explained by Iceland having far more trips than U.K., 5.3 per vessel compared to 2.1; Germany, however, has 2.4 trips per one vessel or only slightly more than U.K.; the considerable difference in yield may be due to the fact that Germany fishes mainly for redfish, U.K. for cod, and may be taken as an indication that it is - under the present conditions - easier to fish redfish than cod. A direct expression of this is found in the actual yield figures for the Icelandic and U.K. trawlers, 1959, average tonnage 663 and 695 tons respectively:

	Iceland (mainly redfish)	U.K. (mainly cod)
Total landings, tons	82,945	9,300
Days on grounds	1,937 ¹⁾	436 ¹⁾
Yield per 1 day on grounds	43 tons	21 tons

For the individual countries (see Table 7, and Figures 7a, b and c), the following changes over the years are to be noted:

Canada, (Mar. & Que.) - The number of otter trawlers has increased from 36 in 1953 to 91 in 1959. The increase is greatest in the 51-150 tonnage class. The number of liners has increased even more, from 11 to 69; almost all liners are in the 51-150 class. On the other hand, the number of dory vessels has decreased from 28 to 6.

For Canada (Newfoundland), no change has occurred for the trawlers; the two dory vessels of 1953 have disappeared, and one liner has replaced them.

Denmark (Faroes) presents a small increase in trawlers, and a change from smaller to larger vessels: the trawlers below 150 tons have disappeared; those in the 151-500 class have decreased, but the trawlers > 500 tons have increased from 3 to 9. The number of liners has almost doubled; the increase is larger in the 151-500 class than in the 51-150 class.

The French trawler fleet shows only a small increase from 34 to 37 vessels.

The German trawler fleet, almost exclusively the 501-900 class, has increased from 66 vessels in 1956 to 81 in 1959.

For Iceland (501-900 class) there is a considerable decrease from 1953 to 1956, but a much larger increase from 1956 to 1959 (in connection with the new fishery for redfish).

Italy has had two to three large trawlers (ca. 1,400 tons) operating in the Area through the whole period.

Norway. For this country a slight decrease has occurred for both trawlers and liners.

The Portuguese trawler fleet (22 vessels in the 901-1800 class) has remained unchanged through the period. The number of dory vessels has increased from 45 to 49; the smallest class, 151-500, is considerably reduced, the 501-900 class shows a smaller increase and the 901-1800 class a very large increase, from 12 to 20 vessels.

For Spain there is a small increase in pair trawlers as well as in otter trawlers; the increase has taken place almost exclusively from 1956 to 1959.

United Kingdom. The number of small trawlers (mainly 501-900 class) has fluctuated strongly and is now only about one-third of what it was in 1953. It is to be noted that the smallest group, 151-500 class, has totally disappeared. A new development is the introduction of the large factory ships (ca. 2,600 tons).

1) The comparison to be made here was greatly hampered by the inconsistency of reporting effort data. For 1959 the three countries which should have been compared have reported effort data as follows:

Germany - No. of trips, days fished
Iceland - Days on grounds
U.K. - Days absent, hours fished

In the above case the comparison was made for U.K. by multiplying the total number of trips (taken from "The List of Vessels") by the figure estimated for a voyage to and from the fishing grounds - 16 days, and subtracting the result from the reported figure for "days absent".

It is suggested that action be taken to ensure a more complete comparability of effort data reported.

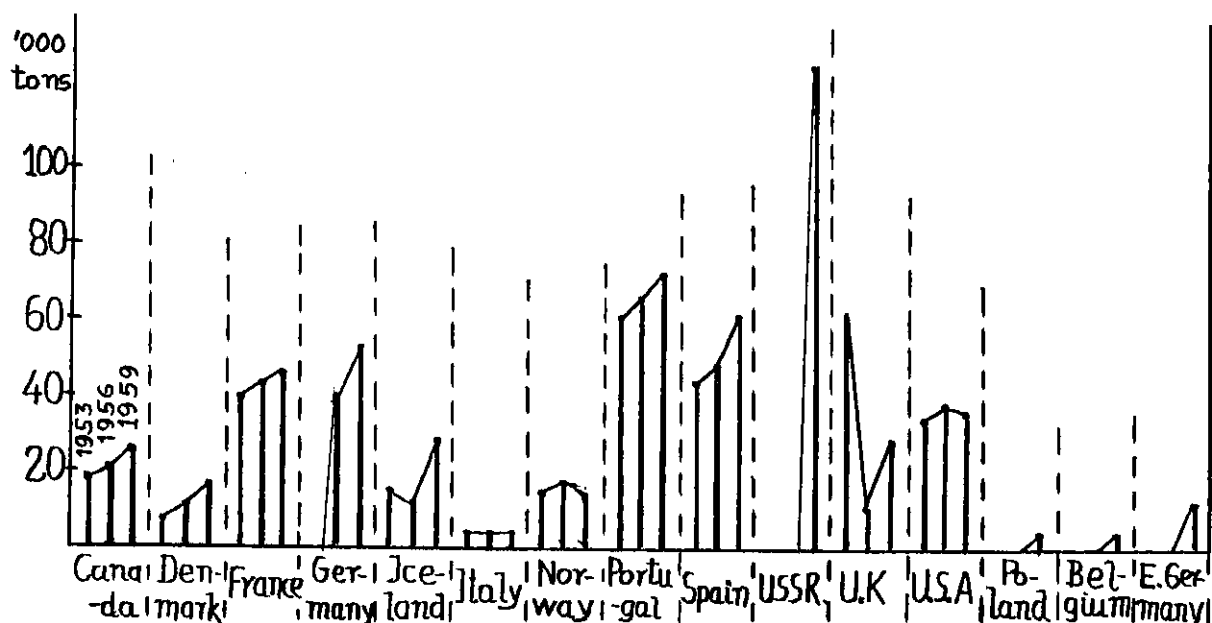


Figure 8 - Changes in total tonnage of fleets, by countries, 1953-1956-1959.

U.S.A. There is a considerable reduction in the number of otter trawlers - from 281 to 226. However the reduction is due to the development of the scallop fishery. When the scallop draggers are added to the otter trawlers, a small increase appears - from 281 to 321.

Thus, Norway shows a small, U.K. a larger decrease; Italy remains unchanged; all the other countries show smaller or larger increases.

Table 9 presents a summary of these movements, and percentage increase (or decrease) from 1953 to 1956.

Figure 8 illustrates the changes in tonnage over the years.

As mentioned above, a number of countries show a decrease in the number of vessels of the smaller size-classes, and an increase in vessels of the larger size-classes. This trend toward larger vessels is also apparent from the increase in average size in each of the size-classes over the years 1953 to 1959 (see Table 10). This increase is only slightly pronounced, and in cases even substituted by a decrease, for the fleets of Canada and U.S.A., i.e. the countries with the fishing grounds right at the door. For the European countries, the increase is considerable for Denmark, Norway, for the Portuguese dory vessels, the Spanish pair-trawlers, but somewhat less pronounced for the other fishing fleets.

The main picture of the changes in the fleets from 1953 through 1956 to 1959 is:

- a. A small decrease in the size of the fleets from 1953 to 1956.
- b. A much larger increase from 1956 to 1959 (only "old" countries).
- c. The entering into the fishery of a very large fleet of trawlers from five to six new countries, first and foremost USSR and Germany.
- d. The appearance of large factory ships, 2,000-3,000 tons.
- e. A general trend in the European fleets - but not the North American - towards larger vessels.
- f. A change in the Canadian fleet from dory fishing to other fishery (liners).
- g. The establishment of a special fleet of scallop draggers in Canada and U.S.A.

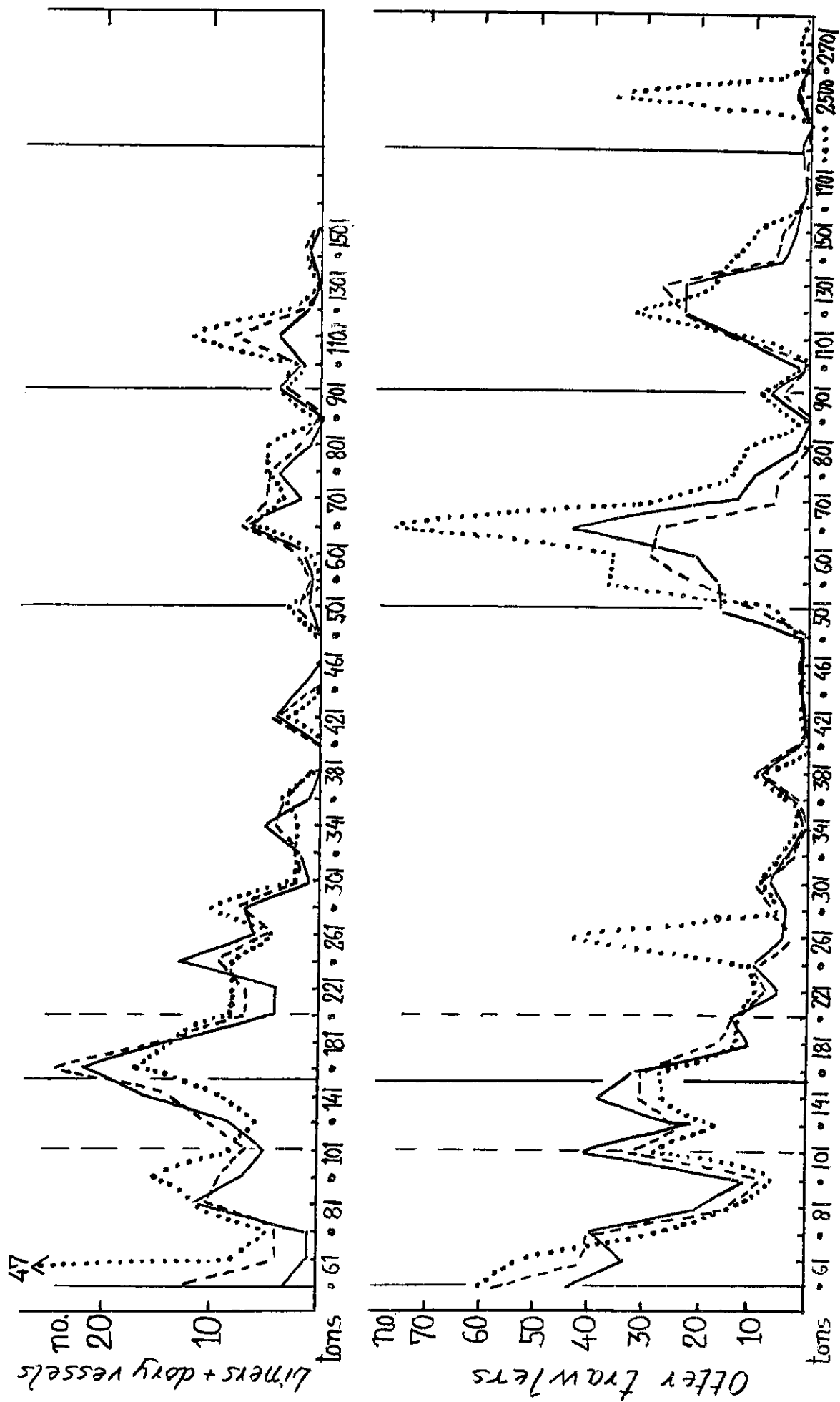


Figure 1 - All countries. Numbers of vessels by smaller size-classes, 1953, 1956 and 1959. The bold vertical lines indicate the present limits of tonnage classes; the stipled lines indicate proposed limits. (Included in the figure are the small number of trawlers from non-member countries fishing in the Convention Area in 1959: Belgium, 2; Poland, 3; East Germany, 16. These are not included in Table 6 of the 1959 List.)

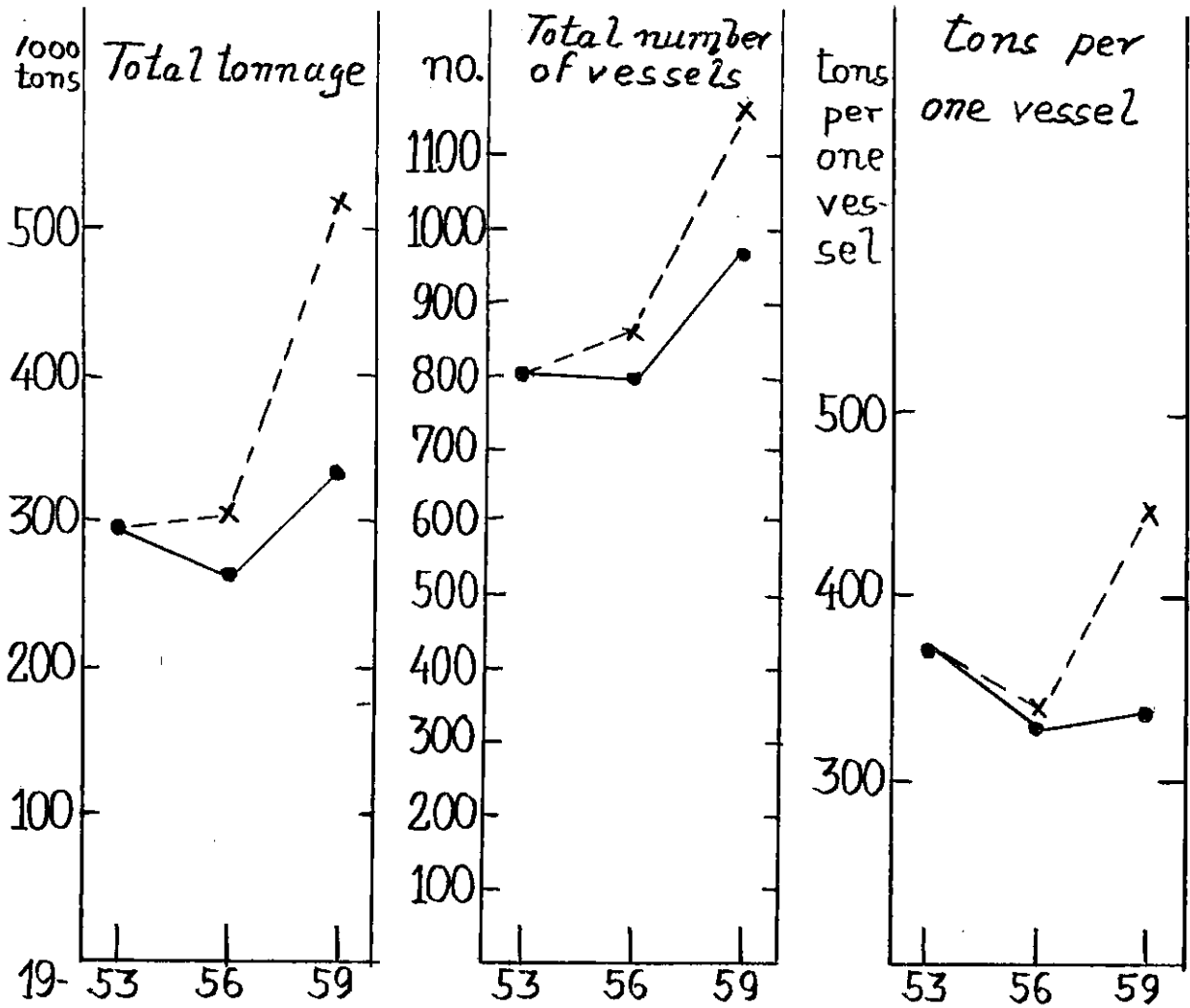


Figure 3 - Changes in the Fishing Fleets of the ICNAF Area, 1953, 1956, 1959. Stipled lines - all countries; bold lines - the twelve "old" countries.

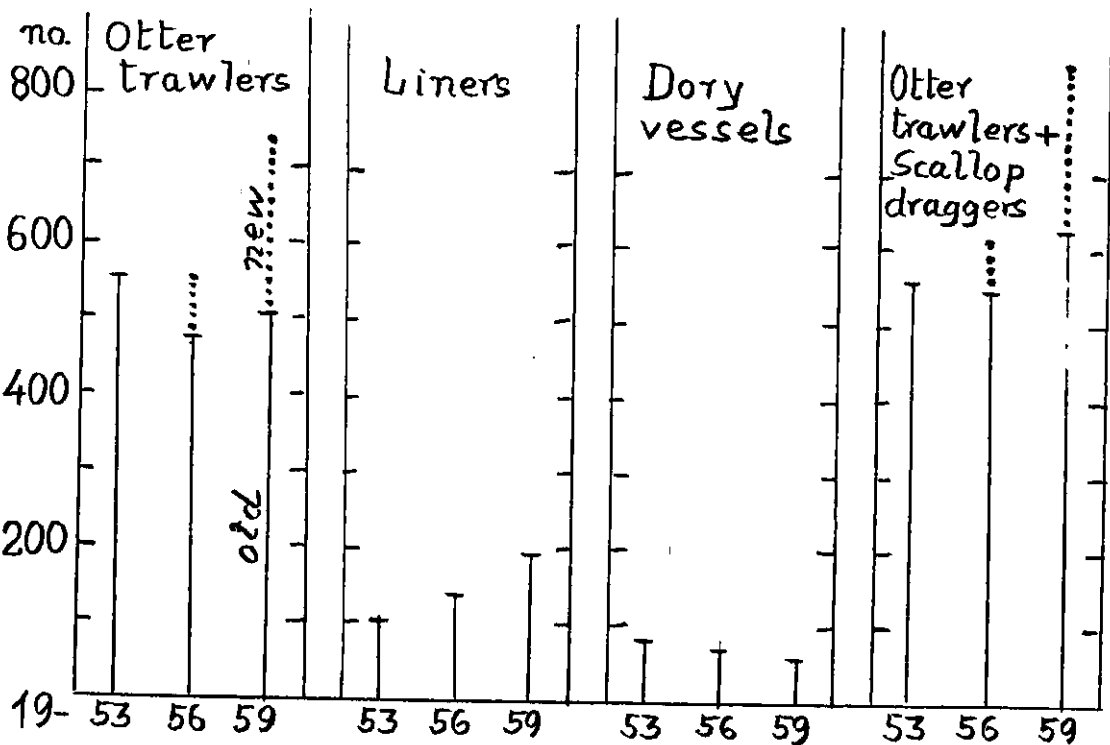


Figure 4 - Changes in numbers of the main categories of vessels through the years. Old countries - bold vertical lines; additions by new countries - stipled vertical lines.

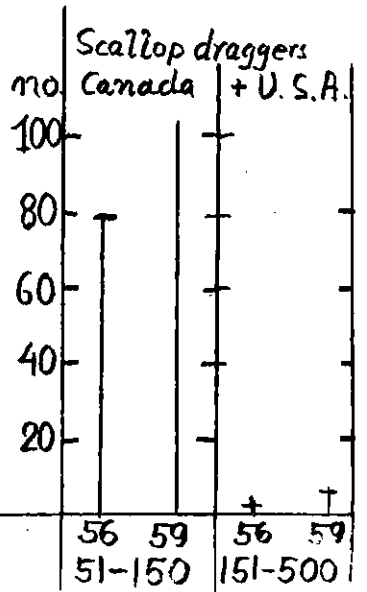
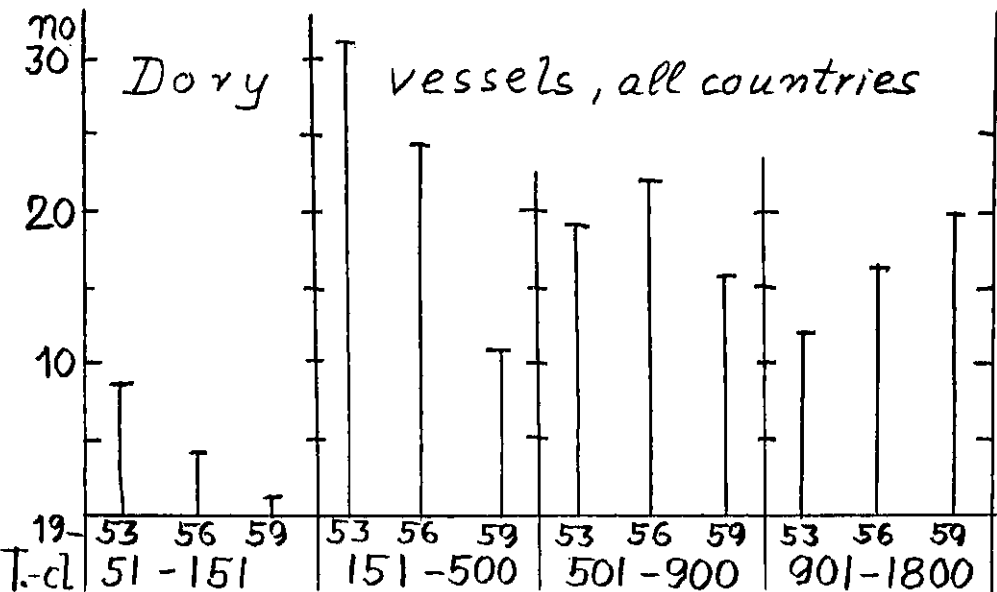
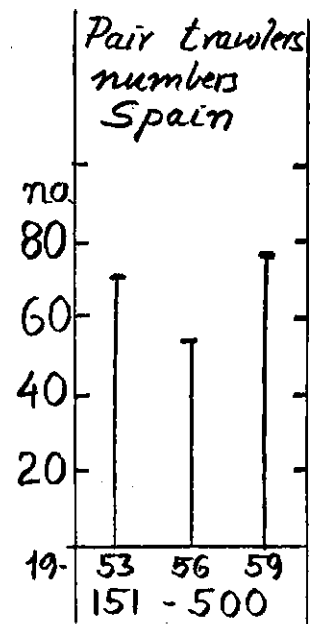
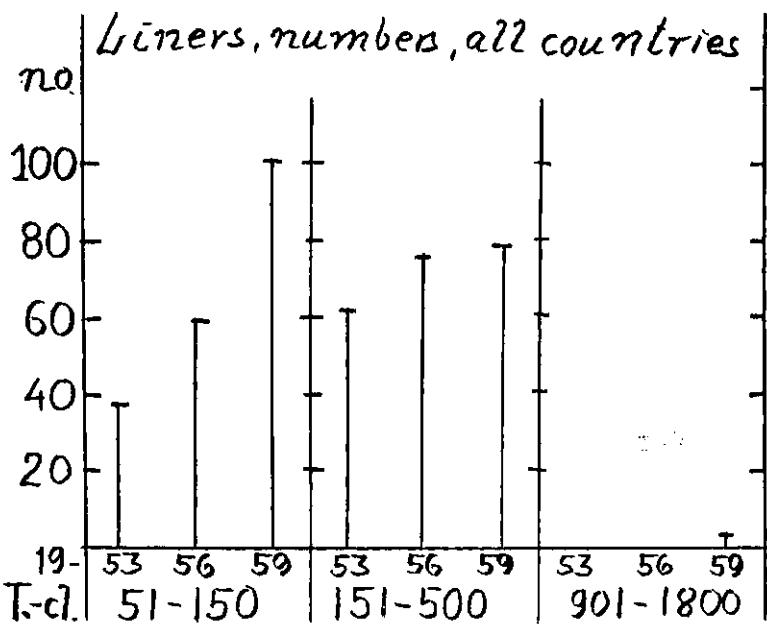
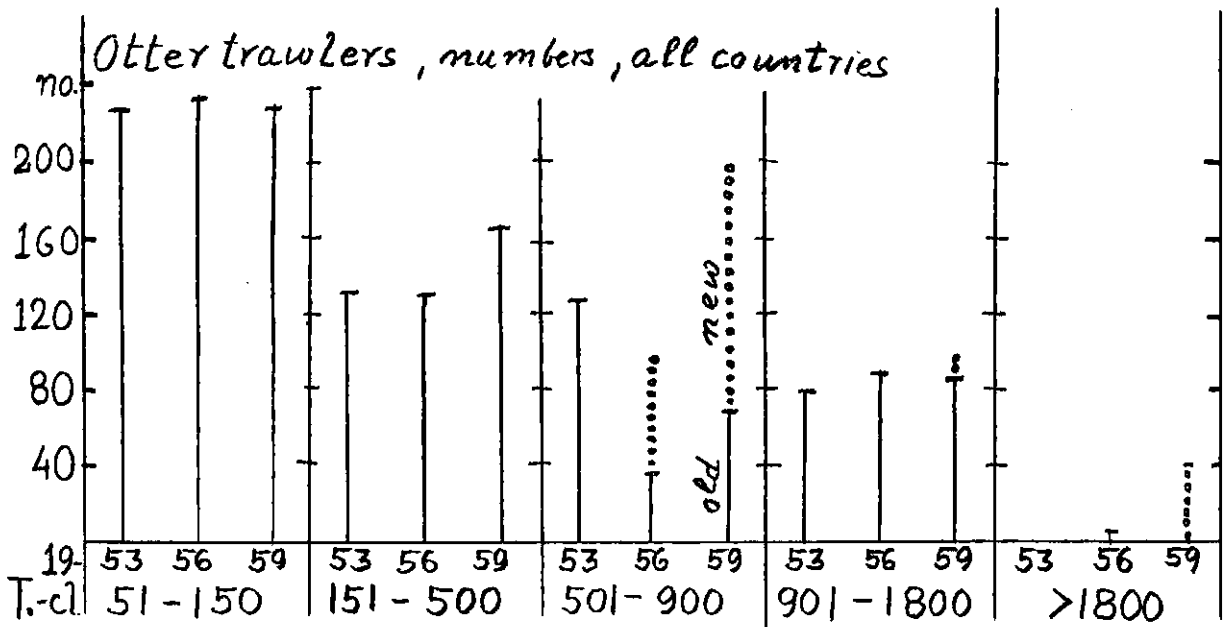


Figure 5 - Changes in the individual size-classes of the various categories of vessels. Numbers by tonnage-classes and years.

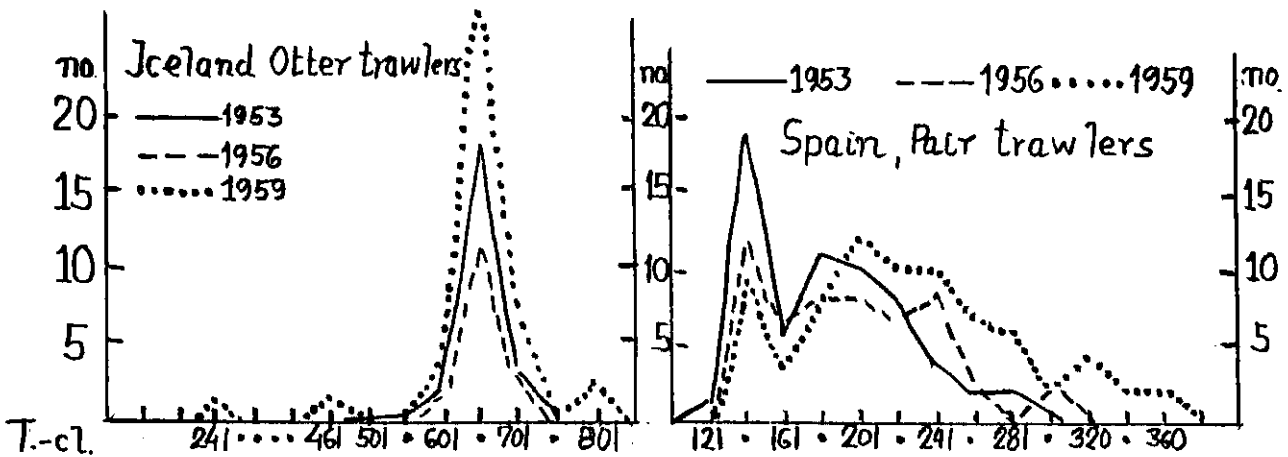
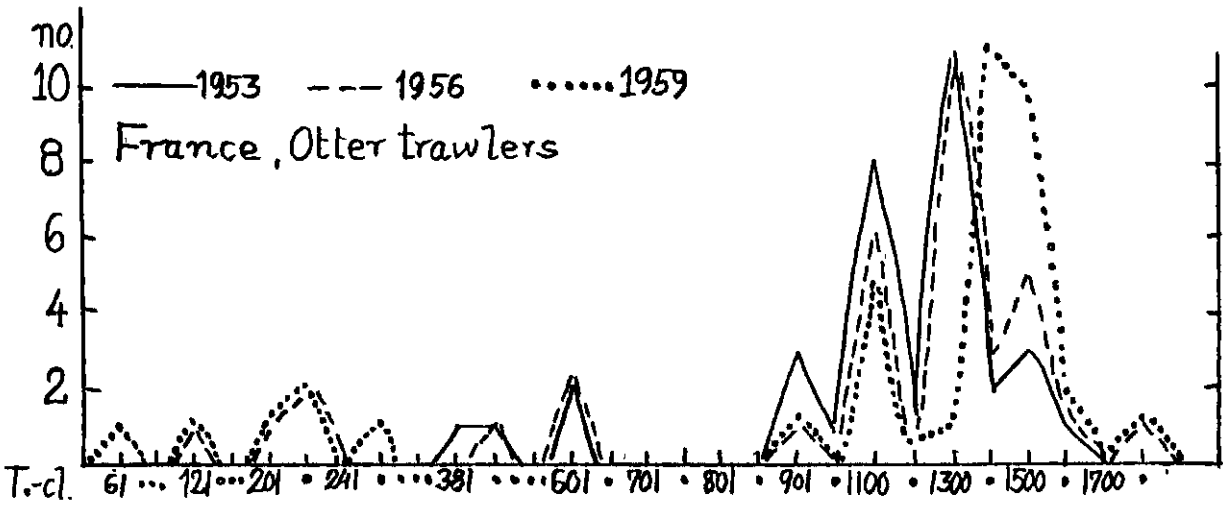
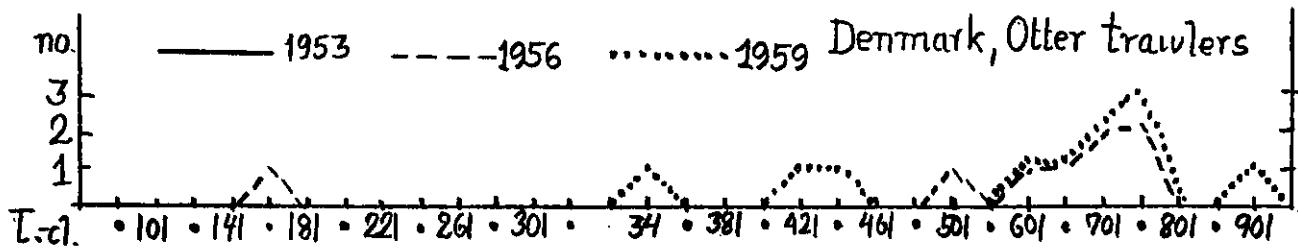
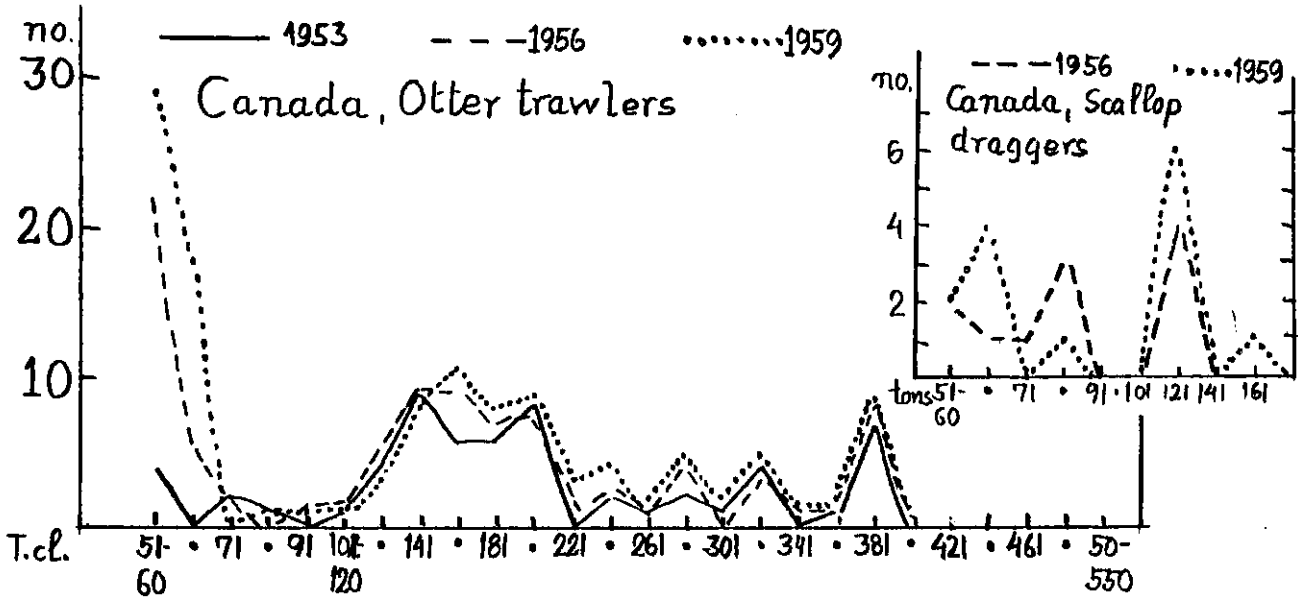


Figure 7a - Numbers by small tonnage classes; countries and vessel categories, otter trawlers, pair trawlers and scallop draggers.

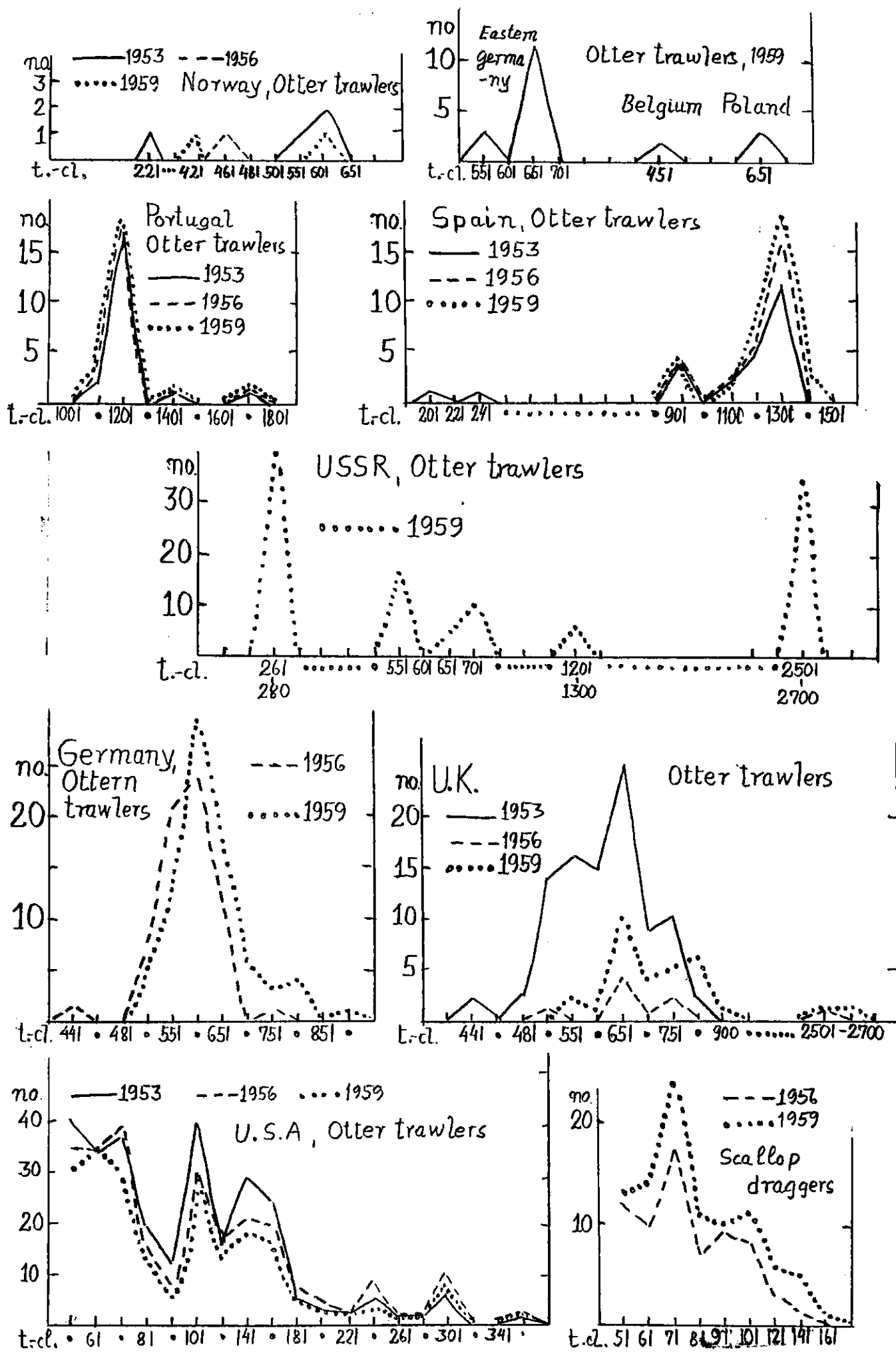


Figure 7b - Numbers by small tonnage classes, countries and vessel categories, otter trawlers and scallop draggers.

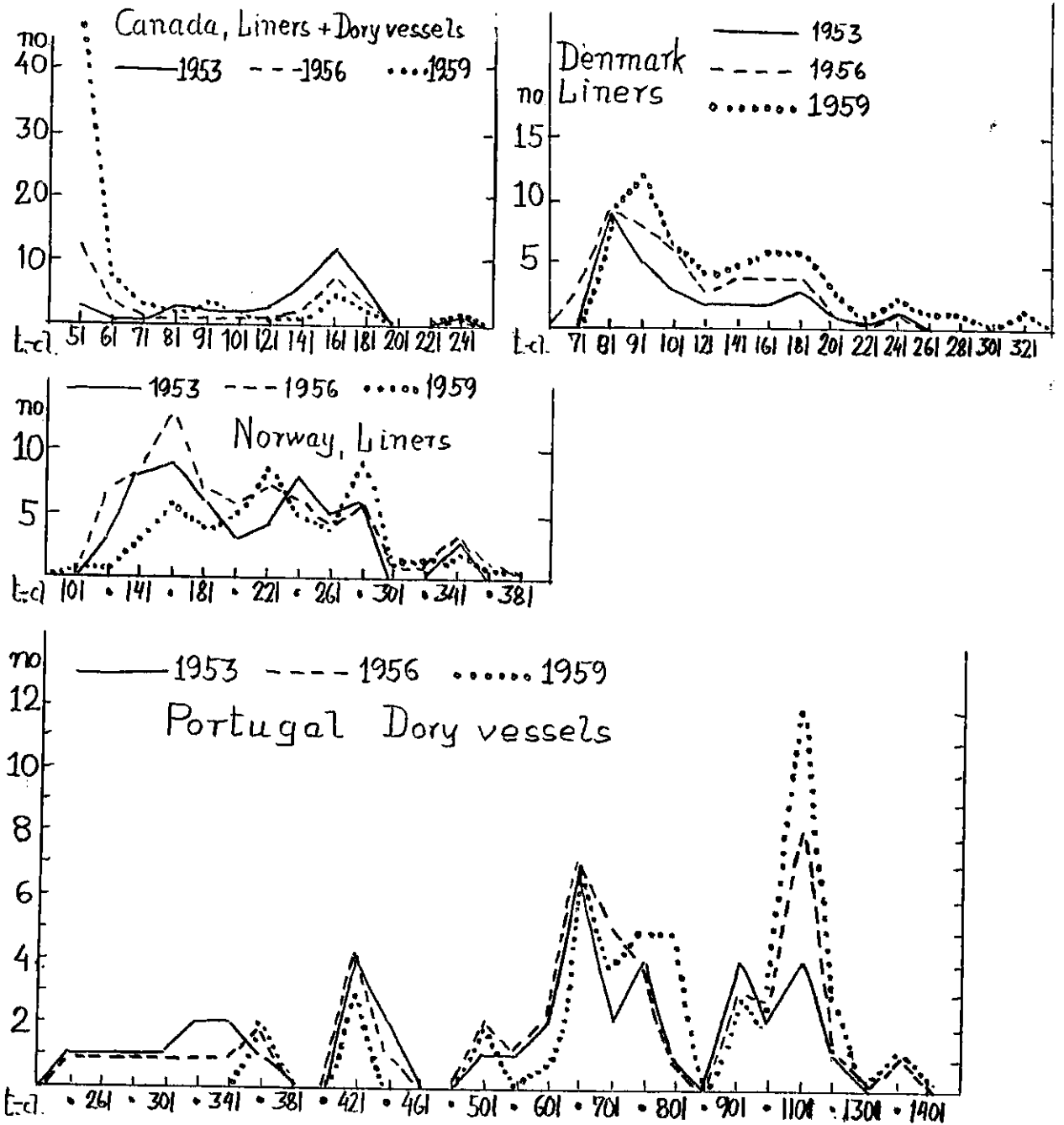


Figure 7c - Numbers by small tonnage classes, countries and vessels categories, liners and dory vessels.

Table 1 - Otter Trawlers, 1953, by smaller size-classes.

Tonnage Class	Canada	Denmark	France	Iceland	Italy	Norway	Portugal	Spain	UK	USA	Total
51-60	4									40	44
61-70										34	34
71-80	2									37	39
81-90	1									19	20
91-100		1								11	12
101-120	1									39	40
121-140	4	1								16	21
141-160	9									29	38
161-180	6	2								24	32
181-200	6									5	11
201-220	8	1						1		4	14
221-240						1				5	6
241-260	2							1		7	10
261-280	2									2	4
281-300	2									2	4
301-320	1									6	7
321-340	4										4
341-360											
361-380	1									1	2
381-400	7		1								8
401-420			1								1
421-440											
441-460									2		2
461-480		2									2
481-500									2		2
501-550	1	1							14		16
551-600						1			16		17
601-650			2	2		2			15		21
651-700		1		18					25		44
701-750		1		3					9		13
751-800									10		10
801-850									2		2
851-900											
901-1000			3					4			7
1001-1100			1								1
1101-1200			8		1		2	2			13
1201-1300			1				18	5			24
1301-1400			11					12			23
1401-1500			2		2		1				5
1501-1600			3								3
1601-1700			1								1
1701-1800							1				1
1801-1900											
⋮											
2501-2700											
2701-2900											
Total	61	10	34	23	3	4	22	25	95	281	558

Table 2 - Otter Trawlers, 1956, by smaller size-classes.

Age Class	Canada	Denmark	France	Germany	Iceland	Italy	Norway	Portugal	Spain	UK	USA	Total
51-60	22										35	57
61-70	6										35	41
71-80	2										38	40
81-90											15	15
91-100	1										8	9
101-120	1										30	31
121-140	5		1								18	24
141-160	9										21	30
161-180	9	1									20	30
181-200	7										8	15
201-220	7		1								5	13
221-240	1		2								4	7
241-260	2										8	10
261-280	1										2	3
281-300	4										2	6
301-320											9	9
321-340	3											3
341-360	1											1
361-380	1										1	2
381-400	9											9
401-420			1									1
421-440												
441-460				1								1
461-480							1					1
481-500												
501-550		1		7						1		9
551-600				21			1					22
601-650		1	2	24	2							29
651-700		1		12	11					4		28
701-750		2			3					1		6
751-800		2		1						2		5
801-850												
851-900												
901-1000			1						4			5
1001-1100												
1101-1200			7			1		3	2			13
1201-1300			1					17	6			24
1301-1400			11						16			27
1401-1500			3			2		1				6
1501-1600			5									5
1601-1700			1									1
1701-1800								1				1
1801-1900			1									1
1901-2000												
2001-2100												
2101-2200												
2201-2300												
2301-2400												
2401-2500												
2501-2700										1		1
2701-2900												
Total	91	8	37	66	16	3	2	22	28	9	259	541

Table 3 - Liners, Dory Vessels and Pair Trawlers, 1953, by smaller size-classes.

Tonnage Class	Liners		Dory Vessels				Total	Pair Trawlers
	Canada	Denmark	Norway	Portugal	UK	Spain		
51-60	3						3	
61-70	1						1	
71-80	1						1	
81-90	3	9					12	
91-100	2	6					8	
101-120	2	3					5	
121-140	3	2	3				8	1
141-160	6	3	8				17	19
161-180	11	3	9				23	6
181-200	5	5	6				16	11
201-220		1	3				4	10
221-240			4				4	8
241-260	1	2	8	1	1		13	4
261-280			5	1			6	2
281-300			6	1			7	2
301-320				1			1	
321-340				2			2	
341-360			3	2			5	
361-380				1			1	
381-400								
401-420								
421-440				4			4	
441-460				2			2	
461-480								
481-500								
501-550				1			1	
551-600				1			1	
601-650				2			2	
651-700				7			7	
701-750				2			2	
751-800				4			4	
801-850				1			1	
851-900								
901-1000				4			4	
1001-1100				2			2	
1101-1200				4			4	
1201-1300				1			1	
1301-1400								
1401-1500				1			1	
1501-1600								
1601-1700								
1701-1800								
Total	38	34	55	45	1	173	63	

Table 4 - Liners, Dory Vessels, Scallop Draggers and Pair Trawlers, 1956, by smaller size-classes.

Tonnage Class	Liners, Dory Vessels						Scallop Draggers			Pair Trawlers
	Canada	Denmark	France	Norway	Portugal	Total	Canada	USA	Total	Spain
51-60	12		1			13	2	12	14	
61-70	4					4	1	10	11	
71-80	1	3				4	1	17	18	
81-90	1	9				10	3	7	10	
91-100	1	8				9		9	9	
101-120	1	6				7		8	8	
121-140		3		7		10	4	3	7	
141-160	2	4		8		14		1	1	12
161-180	7	4		13		24				7
181-200	3	4		7		14				8
201-220		1		6		7				8
221-240				7		7				7
241-260	1	1		6	1	9				8
261-280				4	1	5				2
281-300				6	1	7				
301-320				1	1	2				2
321-340				1	1	2				
341-360				3	1	4				
361-380				1	2	3				
381-400										
401-420										
421-440					4	4				
441-460					1	1				
461-480										
481-500										
501-550					2	2				
551-600					1	1				
601-650					2	2				
651-700					7	7				
701-750					5	5				
751-800					4	4				
801-850					1	1				
851-900										
901-1000					3	3				
1001-1100					3	3				
1101-1200					8	8				
1201-1300					1	1				
1301-1400										
1401-1500					1	1				
1501-1600										
1601-1700										
1701-1800										
Total	33	43	1	71	51	199	11	67	78	54

Table 5 - Summary of categories, numbers and tonnage of fishing vessels, by countries.
Convention Area, 1953.

CANADA		<u>No. of Vessels</u>	<u>Tonnage</u>	<u>Tons per Vessel</u>
<u>Maritimes & Quebec</u>				
Otter Trawlers	51-150	11	1,099	100
" "	151-500	24	5,985	249
" "	501-900	1	536	536
" "	Total	36	7,620	
Liners	51-150	11	888	81
Dory Vessels	51-150	7	931	133
" "	151-500	21	3,681	175
" "	Total	28	4,612	
Grand Total		75	13,120	
<u>Newfoundland</u>				
Otter Trawlers	51-150	3	304	101
" "	151-500	22	5,330	242
" "	Total	25	5,634	
Danish Seiners	51-150	4	377	94
Dory Vessels	51-150	2	206	103
Grand Total		31	6,217	
CANADA - Total		106	19,337	
<u>DENMARK</u>				
Otter Trawlers	51-150	2	232	116
" "	151-500	5	1,506	301
" "	501-900	3	1,900	633
" "	Total	10	3,638	
Liners	51-150	21	2,079	99
" "	151-500	13	2,488	114
" "	Total	34	4,567	
DENMARK - Total		44	8,205	
<u>FRANCE</u>				
Otter Trawlers	151-500	2	797	399
" "	501-900	2	1,300	650
" "	901-1800	30	38,901	1,297
" "	Total	34	40,998	
<u>ICELAND</u>				
Otter Trawlers	501-900	23	15,430	671
<u>ITALY</u>				
Otter Trawlers	901-1800	3	4,198	1,399
<u>NORWAY</u>				
Otter Trawlers	151-500	1	223	223
" "	501-900	3	1,796	599
" "	Total	4	2,019	
Liners	51-150	6	807	135
" "	151-500	49	11,103	226
" "	Total	55	11,910	
NORWAY - Total		59	13,929	

continued

Table 5 (cont'd) - Summary of categories, numbers and tonnage of fishing vessels, by countries. Convention Area, 1953.

PORTUGAL			<u>No. of Vessels</u>	<u>Tonnage</u>	<u>Tons per Vessel</u>
Otter Trawlers	901-1800		22	28,001	1,273
Dory Vessels	151-500		14	5,007	358
"	"	501-900	19	12,966	682
"	"	901-1800	12	13,337	1,116
		Total	45	31,310	
PORTUGAL - Total			67	59,311	
SPAIN					
Otter Trawlers	151-500		2	468	234
"	"	501-900	-	-	
"	"	901-1800	23	28,772	1,251
"	"	Total	25	29,240	
Pair Trawlers	51-150		2	284	142
"	"	151-500	63	12,412	197
"	"	Total	65	12,696	
SPAIN - Total			90	41,936	
UNITED KINGDOM					
Otter Trawlers	151-500		4	1,902	476
"	"	501-900	91	58,678	645
"	"	Total	95	60,580	
Liners	151-500		1	257	257
UNITED KINGDOM - Total			96	60,837	
UNITED STATES					
Otter Trawlers	51-150		208	18,076	87
"	"	151-500	73	14,776	202
"	"	Total	281	32,852	

Table 6 - Summary of categories, numbers and tonnage of fishing vessels, by countries.
Convention Area, 1956.

CANADA		No. of Vessels	Tonnage	Tons per Vessel
<u>Maritimes & Quebec</u>				
Otter Trawlers	51-150	30	2,260	75
" "	151-500	29	7,551	260
" "	Total	59	9,811	
Soallop Draggers	51-151	12	1,105	92
Liners	51-150	18	1,131	63
Dory Vessels	51-150	2	296	148
" "	151-500	11	2,001	182
" "	Total	13	2,297	
Grand Total		102	14,344	
<u>Newfoundland</u>				
Otter Trawlers	51-150	9	737	82
" "	151-500	22	5,216	234
" "	Total	31	5,953	
Liners	51-150	2	132	66
Grand Total		33	6,085	
CANADA - Total		135	20,429	
<u>DENMARK</u>				
Otter Trawlers	151-500	1	180	180
" "	501-900	7	4,836	691
" "	Total	8	5,016	
Liners	51-150	30	2,954	98
" "	151-500	13	2,378	183
" "	Total	43	5,332	
DENMARK - Total		51	10,348	
<u>FRANCE</u>				
Otter Trawlers	151-500	5	1,207	241
" "	501-900	2	1,300	650
" "	901-1800	29	39,382	1,358
" "	1801-	1	1,822	1,822
" "	Total	37	43,711	
<u>GERMANY</u>				
Otter Trawlers	151-500	1	454	454
" "	501-900	65	39,575	609
" "	Total	66	40,029	
<u>ICELAND</u>				
Otter Trawlers	501-900	16	10,679	667
<u>ITALY</u>				
Otter Trawlers	901-1800	3	4,198	1,399
<u>NORWAY</u>				
Otter Trawlers	151-500	1	471	471
" "	501-900	1	562	562
" "	Total	2	1,033	
Liners	51-150	10	1,249	125
" "	151-500	61	13,649	224
" "	Total	71	14,898	
NORWAY - Total		73	15,931	

continued

Table 6 (cont'd) - Summary of categories, numbers and tonnage of fishing vessels, by countries. Convention Area, 1956.

	<u>No. of Vessels</u>	<u>Tonnage</u>	<u>Tons per Vessel</u>
PORTUGAL			
Otter Trawlers 901-1800	22	27,951	1,270
Dory Vessels 151-500	13	4,687	361
" " 501-900	22	15,173	690
" " 901-1800	16	18,124	1,133
" " Total	51	37,984	
PORTUGAL - Total	73	65,935	
SPAIN			
Otter Trawlers 901-1800	26	35,471	1,364
Pair Trawlers 151-500	52	10,966	211
SPAIN - Total	78	46,437	
UNITED KINGDOM			
Otter Trawlers 501-900	8	5,548	694
" " 901-1800	-	-	
" " 1801-	1	2,605	2,605
" " Total	9	8,153	
UNITED STATES			
Otter Trawlers 51-150	185	15,846	86
" " 151-500	73	15,376	211
" " Total	258	31,222	
Scallop Draggers 51-150	67	5,399	81
" " 151-500	1	155	155
" " Total	68	5,554	
USA - Total	326	36,776	

Table 7 - Changes in the fishing fleets, by countries, for the three 3-year intervals: 1953-1956-1959.

Tonnage Class	Otter Trawlers		Liners (also Halibut)		Dory Vessels		Others	
	Numbers	Tons	Numbers	Tons	Numbers	Tons	Numbers	Tons
Canada (Mar & Qué.)								
51-150	11 30 53	1,099 2,260 3,525	11 18 64	888 1,131 3,954	7 2 1	931 296 149	12 13	- 1,105 1,191
151-500	24 29 38	5,985 7,551 9,961	- - 5	- - 870	21 11 5	3,681 2,001 980	- 1	- - 161
501-900	1 - -	536 - -	- - -	- - -	- - -	- - -	- - -	- - -
Total	36 59 91	7,620 9,811 13,486	11 18 69	888 1,131 4,824	28 13 6	4,612 2,297 1,129	12 14	- 1,105 1,352
Canada (Nfld.)								
51-150	3 6 3	304 563 325	- 2 1	- 132 98	2 - -	206 - -	4 3 1	377 174 98
151-500	22 22 22	5,330 5,216 5,256	- - -	- - -	- - -	- - -	- - -	- - -
Total	25 28 25	5,634 5,779 5,581	- 2 1	- 132 98	2 - -	206 - -	4 3 1	377 174 98
Denmark								
51-150	2 - -	232 - -	21 30 34	2,079 2,954 3,427	- - -	- - -	- - -	- - -
151-500	5 1 3	1,506 180 1,211	13 13 23	2,488 2,378 4,675	- - -	- - -	- - -	- - -
501-900	3 7 8	1,900 4,836 5,627	- - -	- - -	- - -	- - -	- - -	- - -
901-1800	- - 1	- - 954	- - -	- - -	- - -	- - -	- - -	- - -
Total	10 8 12	3,638 5,016 7,792	34 43 57	4,567 5,332 8,102	- - -	- - -	- - -	- - -
France								
51-150	- - 2	- - 187	- - -	- - -	- - -	- - -	- - -	- - -
151-500	2 5 4	797 1,207 932	- - -	- - -	- - -	- - -	- - -	- - -
501-900	2 2 -	1,300 1,300 -	- - -	- - -	- - -	- - -	- - -	- - -
901-1800	30 29 30	38,901 39,382 42,447	- - -	- - -	- - -	- - -	- - -	- - -
> 1800	- 1 1	- 1,822 1,822	- - -	- - -	- - -	- - -	- - -	- - -
Total	34 37 37	40,998 43,711 45,388	- - -	- - -	- - -	- - -	- - -	- - -
Germany								
151-500	- 1 -	- 454 -	- - -	- - -	- - -	- - -	- - -	- - -
501-900	- 65 80	- 39,575 52,158	- - -	- - -	- - -	- - -	- - -	- - -
901-1800	- - 1	- - 925	- - -	- - -	- - -	- - -	- - -	- - -
Total	- 66 81	- 40,029 53,083	- - -	- - -	- - -	- - -	- - -	- - -
Iceland								
151-500	- - 2	- - 740	- - -	- - -	- - -	- - -	- - -	- - -
501-900	23 16 39	15,430 10,679 26,451	- - -	- - -	- - -	- - -	- - -	- - -
Total	23 16 41	15,430 10,679 27,191	- - -	- - -	- - -	- - -	- - -	- - -
Italy								
901-1800	3 3 2	4,198 4,198 3,299	- - -	- - -	- - -	- - -	- - -	- - -
Norway								
51-150	- - -	- - -	6 10 3	807 1,249 378	- - -	- - -	- - -	- - -
151-500	1 1 1	223 471 422	49 61 49	11,103 13,649 12,001	- - -	- - -	- - -	- - -
501-900	3 1 1	1,796 562 631	- - -	- - -	- - -	- - -	- - -	- - -
Total	4 2 2	2,019 1,033 1,053	55 71 52	11,910 14,892 12,379	- - -	- - -	- - -	- - -

1) Canada (Mar & Qué.), and USA: Scallop Druggers; Canada (Nfld.): Danish Seiners; Spain: Pair Trawl . . . 2) Further 4 Danish Seiners-218 tons (Canada(Mar & Qué.) 1959) (continued)

Table 7 (cont'd) - Changes in the fishing fleets, by countries, for the three 3-year intervals: 1953-1956-1959.

Tonnage Class	Other Trawlers		Liners (also Halibut)		Doxy Vessels		Others ^{1) 2)}	
	Numbers	Tons	Numbers	Tons	Numbers	Tons	Numbers	Tons
Portugal	-	-	-	-	-	-	-	-
151-500	-	-	-	-	14	5,007	4,687	2,012
501-900	-	-	-	-	19	22,966	15,173	17,567
901-1800	22	28,001	27,951	28,000	12	16,200	13,337	18,124
Total	22	28,001	27,951	28,000	45	31,310	37,984	42,519
Spain	-	-	-	-	-	-	-	-
51-150	-	-	-	-	-	-	-	-
151-500	2	468	-	-	-	-	2	284
501-900	-	-	-	-	-	-	63	52,78
901-1800	23	26,333	28,772	35,471	42,235	-	-	-
Total	25	26,333	29,240	35,471	42,235	-	65	52,78
USSR	-	-	-	-	-	-	-	-
151-500	-	39	-	10,296	-	-	-	-
501-900	-	31	-	19,500	-	-	-	-
901-1800	-	6	-	7,200	-	-	-	-
> 1800	-	35	-	89,600	-	-	-	-
Total	-	111	-	126,596	-	-	-	-
United Kingdom	-	-	-	-	-	-	-	-
151-500	4	1,902	-	-	1	-	-	257
501-900	91	58,678	5,548	20,173	-	-	-	-
901-1800	-	-	-	-	-	-	-	-
> 1800	-	2	2,605	5,462	-	-	-	-
Total	95	60,580	8,153	25,635	1	-	-	257
United States	-	-	-	-	-	-	-	-
51-150	208	18,076	15,846	14,563	-	-	-	-
151-500	73	14,776	15,376	12,060	-	-	-	-
Total	281	32,852	31,222	26,623	-	-	-	-
Belgium	-	-	-	-	-	-	-	-
501-900	-	2	-	1,538	-	-	-	-
Poland	-	-	-	-	-	-	-	-
501-900	-	3	-	2,037	-	-	-	-
East Germany	-	-	-	-	-	-	-	-
501-900	-	16	-	10,152	-	-	-	-

1) Canada (Mar & Que.), and USA: Scallop Druggers; Canada (Nfld.): Danish Seiners; Spain: Pair Trawlers. 2) further 4 Danish Seiners-218 tons(Canada(Mar.)1959)

Table 8 - Comparison of landings and total vessel tonnage, by countries, 1959. (only vessels over 50 tons).

	Landings tons round, fresh	Vessels Total Tonnage	Tons Landed per 1 Vessel Ton
Canada	159,032	26,742	6.1
Denmark	37,811	15,894	2.4
France (Metr.)	126,740	44,269	2.9
" (St.P&M)	7,446	932	8.3
Germany	85,282	53,083	1.6
Iceland	82,945	27,191	3.1
Italy	4,902	3,299	1.7
Norway	32,018	13,432	2.2
Portugal	160,279	71,696	2.2
Spain	142,929	60,441	2.4
USSR	181,937	126,596	1.5
UK	18,157	25,635	0.7
USA	200,796	34,998	5.7
Poland	232	2,037	0.1
Belgium	1,694	1,538	1.1
E. Germany	8,995	10,152	0.9

Table 9 - Summary of Development in individual countries, 1953-1959. All Vessels.

	Numbers			Tons			% Increase 53-59	
	1953	1956	1959	1953	1956	1959	Numbers	Tons
Canada	106	135	211	19,337	20,429	26,742	99	28
Denmark	44	51	69	8,205	10,348	15,794	56	92
France	34	37	37	40,998	43,711	45,388	9	17
Germany	-	66	81	-	40,029	53,083	-	-
Iceland	23	16	41	15,430	10,679	27,191	78	76
Italy	3	3	2	4,198	4,198	3,299	-33	-21
Norway	59	73	54	13,929	15,931	13,432	-8	-4
Portugal	67	73	72	59,311	65,935	71,696	7	17
Spain	90	78	111	41,936	46,437	60,441	23	31
USSR	-	-	111	-	-	126,596	-	-
UK	96	9	31	60,837	8,153	25,635	-68	-58
USA	281	326	321	32,852	36,776	34,998	14	6
Belgium	-	-	2	-	-	1,538	-	-
Poland	-	-	3	-	-	2,037	-	-
E. Germany	-	-	16	-	-	10,152	-	-
Total	803	867	1,162	297,033	302,626	518,022		

Table 10 - Changes in average tonnage of vessel categories and size-classes.
1953-1956-1959.

		Otter Trawlers				Liners				Dory Vessels ¹⁾			
		51-150	151-500	501-900	901-1800	51-150	151-500	501-900	901-1800	51-150	151-500	501-900	901-1800
Canada (M&Q)	1953	100	249	536		81				133	175		
"	1956	75	260			63				148	182		
"	1959	66	262			60	174			149	196		
" (Nfld)	1953	101	242							103			
"	1956	82	234			66							
"	1959	108	239			98							
Denmark	1953	116	301	633		99	114						
"	1956		180	691		98	183						
"	1959		404	703	954	101	203						
France	1953		399	650	1,297								
"	1956		241	650	1,358								
"	1959	94	233		1,415								
Germany	1956		454	609									
"	1959			652	925								
Iceland	1953			671									
"	1956			667									
"	1959			652	925								
Italy	1953				1,399								
"	1956				1,399								
"	1959				1,650								
Norway	1953		223	599		135	226						
"	1956		471	562		125	224						
"	1959		422	631		126	245						
Portugal	1953				1,273					358	682	1,116	
"	1956				1,270					361	690	1,133	
"	1959				1,273			1,177		402	732	1,147	
Spain	1953		234		1,251					142	197		
"	1956				1,364					211			
"	1959				1,280					233			
USSR	1959		264	630	1,200								
UK	1953		476	645			257						
"	1956			694									
"	1959			695									
USA	1953	87	202										
"	1956	86	211										
"	1959	86	211										

1) for Spain, Pair Trawlers