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DEPARTMENT OF FISHERIES
OF CANADA

Canada. Commission of Enquiry into
the Atlantic Salt Fish Industry

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REPORT

ATLANTIC SALT FISH COMMISSION

APR 21 1974
MEMORIAL UNIVERSITY
OF NEWFOUNDLAND

ORDER IN COUNCIL DATED 29 OCTOBER, 1964, P.C. 1964-1672

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Dept. of Fisheries of Canada
St. John's, Nfld.

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TO HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL

MAY IT PLEASE YOUR EXCELLENCY,

As the Commissioner appointed by Order in Council dated 29th October, 1964, P.C. 1964-1672, to inquire into and report upon the export marketing problems of the salt fish industry in the Atlantic provinces and, in particular, and without limiting the generality of the foregoing, to consider and report upon:

1. the advisability of establishing a Sales Agency or Board to control exports of cured fish from the Atlantic provinces, having regard to:
 - (a) the market demand for, and competition among different forms of utilization for landings of cod and other species,
 - (b) the competition that exists between salted cod and other salt fish products in world markets, and
 - (c) ways and means of improving the efficiency of the salt fish industry and of increasing returns to primary producers in the context of the overall economic development of the area;
2. relevant matters which may in the course of the inquiry arise or develop and which, in the opinion of the Commissioner, should be included within the scope of the inquiry and report.

I BEG TO SUBMIT FOR YOUR EXCELLENCY'S
CONSIDERATION THIS REPORT.



COMMISSIONER.

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INTRODUCTION

The terms of reference of this Commission are to report on:-

1. the advisability of establishing a Sales Agency or Board to control exports of cured fish from the Atlantic provinces, having regard to:
 - (a) the market demand for, and competition among different forms of utilization for landings of cod and other species,
 - (b) the competition that exists between salted cod and other salt fish products in world markets, and
 - (c) ways and means of improving the efficiency of the salt fish industry and of increasing returns to primary producers in the context of the overall economic development of the area;
2. relevant matters which may in the course of the inquiry arise or develop and which, in the opinion of the Commissioner, should be included within the scope of the inquiry and report.

The Commission is therefore asked whether it would be advisable to establish a Marketing Board to control the export of salt fish in the light of existing demands for the same raw material for other uses, for example in the fresh and frozen trade, and to describe the competition in world markets between salted cod and other salt fish such as herring and bloaters. The Commission is also asked how to make the salt fish industry

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more efficient and how to increase the returns to the primary producer in a way which would augment the overall economic development of the industry, and finally to report upon any relevant matters, for example the effect of social measures such as unemployment insurance.

The present situation of the salt fish industry reflects both an economic and a social problem. There is an urgent need for improvement in the utilization of available resources, which in turn requires an extensive social adjustment. Greater economic efficiency would be comparatively simple to realize by employing recent advances in technology and food engineering, under which, disregarding the social costs, the salt fish industry could be placed nearer to a self-supporting basis. Such a regime would drastically reduce labour costs by employing automation; would ruthlessly discard old and obsolescent plants and methods; and would reduce the number of fishermen and merchants now dependent on it. However, the Commission realizes that the social adjustment would lag behind the rationalization on the economic front resulting in considerable stress and strain.

The Commission took the view that while it must be concerned with technical and economic efficiency it must also give attention to social feasibility, that the problem involved men just as much as it did fish and that sudden changes, desirable though they might be, would be politically difficult to implement. It might be held that the salt fish industry should not receive encouragement to subsist and that greater contributions to national wealth might be gained by diverting all the raw material and energy to an alternative use. But such a point of view overlooks the fact that production of salted fish is deeply rooted in the life of the region, that the people concerned are marked by conservatism,

and that at present there is preventable economic waste in that much more of the product could be made to command a higher export value than it does now.

Most fishermen in the Atlantic provinces, unlike those in Newfoundland, have moved over to supplying the fresh and frozen trade. They produce relatively small amounts of boneless salt fish and salted 'scale' fish (hake, cusk, haddock and pollock). These products present no outstanding problem of production or marketing. Quebec is a special case with its quasi-monopoly in the co-operative production of Gaspé cure. Here also, there seem to be no difficulties in production or marketing. On the north shore of the Gulf of St. Lawrence the fishermen salt their own fish and their problems are similar to those of Newfoundland. This involves about one-tenth of one percent of the working population of Quebec. Thus the problem of salt fish production lies almost entirely with Newfoundland, Labrador and the North Shore of the Gulf.

While the world about it has experienced a dramatic transformation, the salt fish industry, beset by chronic social and economic difficulties, has changed little during the last hundred years. At one time salting was the only known method of preserving protein foods. Gradually other methods and products appeared and were, and are, being vigorously pursued. These products competed and will continue to compete with salted fish, and no effort on the part of the industry was made to improve salted fish to meet this situation. There can be no doubt that in the short-run any change towards greater economic efficiency will be painful whatever modification is eventually adopted.

Governments must also be prepared to revise some of the forms of assistance calculated to improve the situation. A distinction must be made by them between types of assistance. One type may have the effect of making

the status quo bearable and maintaining it. Another type may encourage change towards a well thought out long term plan for a better regime.

Another inescapable fact is that the productivity per unit of effort is too low to support people who are dependent on the inshore fishery. This is even more so for those who must produce salt fish. This cannot be considered a peripheral problem, particularly in Newfoundland, because of its impact on the total economy.

Careful consideration has been given to the many reports and studies that have been made on the salt fish industry. The Commission was especially interested in the Newfoundland Salt Fish Marketing Report of 1963 which proposed the establishment of a National Salt Fish Marketing Board. A careful examination has been made of the effect of such an establishment upon the ills besetting the industry and also upon the feasibility of institutional reform.

After notice had been given in the newspapers of the Atlantic Provinces some weeks in advance, public hearings were held in St. John's, Newfoundland, February 1 to 5; Halifax, Nova Scotia, February 8 to 10; Fredericton, New Brunswick, February 11 to 12; and Quebec, Province of Quebec, February 14th. Each Provincial Government and the main associations representing industry and fishermen made presentations in written and oral form, based upon the terms of reference of this Commission.

The tasks placed upon the Commission by its terms of reference were very complex. Therefore it was felt necessary to trace the history of the present crisis, if such it can be called in the face of its perpetuity, in the hope that, with a full understanding of how it evolved, it would be easier to make workable recommendations. Consequently, the report deals with an abbreviated account of the industry in Canada and the forces which

brought it to its present state; the trend of world demand for salt fish and its relation with demands for other kinds of fish; the position of Canadian exports and production in this; the number of people employed in fishing and their rewards for labour; the current structure of the processing industry; the advantage between salting and freezing as alternative forms of utilization; and comments on deterrents to the development of the salt fish industry.

Throughout this report weights are given as they appear in the original source. No attempt has been made to convert from the Canadian to the metric system. This is done in the interest of easier verification and as a concession to established habits of thinking. Therefore, in this respect, the report lacks uniformity. A table of weights used has been included in the Appendix.

The Commissioner wishes to thank his research assistants, Mr. W.L. Posthumus and Mr. C.R. Molson, who were made available by the Department of Trade and Commerce and the Department of Fisheries respectively, for their unflagging interest in the problem and the tasks before them. The Commission was also ably assisted by its Secretary, Mr. Roger Bedard, whose presence added to the ease of performance. Thanks are due also to Miss Ann Montgomery whose willingness and patience were exemplary.

The work owes much to the Assistant Deputy Minister of Trade and Commerce, Mr. Harvey, who made available the facilities of his Department to the Commission. Thanks are also due to Dr. A.W.H. Needler, Deputy Minister of Fisheries, who placed the services of his Department at the Commissioner's disposal. And special thanks are due to the Area Director of Fisheries, Newfoundland, Mr. H.R. Bradley, to Mr. Loran Baker, Area

Director of Fisheries for the Maritime Provinces, as well as to Mr. Leo Morin of Quebec and their staffs who did much to help the work in the field and at the Public Hearings.

Valuable consultations were held with Mr. Ian McArthur, Chairman of the Fisheries Prices Support Board, with Mr. W. C. Mackenzie, Director, Economics Service, Fisheries Department, and with Mr. Ray Kinsella, Assistant Director (Fisheries), Agriculture and Fisheries Branch, Department of Trade and Commerce. Mr. Leo Lafrance of the Office of the Privy Council guided the Commission through the intricacies of procedure. To all these gentlemen the Commission offers its thanks.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The conclusions and recommendations of the Commission have been reached after careful consideration of the opinions placed before it especially during the public hearings, and after detailed examination of many reports treating different aspects of the problem and the Commission's own research program. They are summarized as follows:

- The basic problem in the Atlantic Coast fisheries is low productivity per unit of effort, especially in the inshore fishery.
- There are too many people dependant on fishing and therefore they are only marginally supported.
- Government efforts to correct this situation while laudable, are often contradictory.
- The long term trend in world trade in salt fish is downwards.
- The long term trend in world trade in fresh and frozen fish is upwards.
- The utilization of the Atlantic Coast catch shows an upward trend in the proportion frozen and a downward trend in the proportion cured.

- The production of salt fish is primarily a Newfoundland activity.
- Salt fish production is dependant on the inshore fishermen.
- The portion of the stocks of cod available to the inshore fishery is limited.
- The production of salt fish by fishermen is unsatisfactory.
- In present Canadian production of salt fish there are preventable economic wastes, such as low instead of high qualities.
- These preventable economic wastes are not primarily a marketing problem; they are a production problem.
- This prevention cannot be achieved by the establishment of a National Salt Fish Marketing Board.
- There is not sufficient agreement amongst Provinces or fishermen to make a National Salt Fish Marketing Board feasible.
- Some of the advantages to be obtained from the establishment of a National Salt Fish Marketing Board may be achieved by other means.
- In preventing economic wastes, that is by improving quality and kind, the unit value of Canadian exports of salt fish can be improved.
- If this can be accomplished many marketing problems will tend to disappear.
- In achieving these advantages nothing should be done to prejudice the expansion of the freezing industry and the encouragement of its expansion should be continued.
- There are too many small inefficient salt fish finishing and packing plants.
- Exporting and marketing of salt fish by the existing industry is generally desirable at this time although this has certain weaknesses.
- The competition between salted cod and other salted fish such as herring and mackerel is negligible and is likely to remain so.

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RECOMMENDATIONS

That at this time a National Salt Fish Marketing Board be not established because a solution to the production problem is a prerequisite and because there is not sufficient agreement amongst the Atlantic Provinces for such a board.

That the manufacturing or making of salt fish be taken out of the hands of the fishermen.

That a manufacturing agency be established for the primary purpose of salting fish, this being the most feasible way of improving quality; the agency also being empowered to produce completely finished cures.

That these products be offered for sale by auction or by tender to Canadian exporters, the agency having the right, if necessary, to export salt fish directly.

That the efforts of Governments to reduce the number of inshore fishermen, including such measures that will assist them to migrate to economically viable centres, receive every encouragement and support, as should the already established training centres for young fishermen.

That more care be taken by Governments in choosing the types of assistance given to primary producers, distinguishing between those that tend to perpetuate the status quo and those that will make for a more viable regime.

That adjustment should be made to unemployment insurance to mitigate its breaks upon productivity in the fishing industry.

That nothing be done in accomplishing these ends that will prejudice the expansion of the freezing industry.

CHAPTER I

THE PROBLEM AND MEASURES TOWARDS ITS SOLUTION

1. This chapter is a compendium. Evidence is brought together from succeeding chapters of the report, the transcripts of the public hearings and from the many documents that have been issued hitherto. Conclusions are drawn and suggestions are made about steps towards solutions of parts of the problem; how in fact habits and patterns that suited one particular age, but are no longer suitable, can be prevented from dominating our own.

The Inshore Fishery

2. The pattern of utilization of the Atlantic Coast catch indicates that, as for the world fishery, a declining proportion is cured and an increasing proportion is frozen. The economic pull of the fresh and frozen trade for off-shore or bank fish has meant that most of the salt fish produced on the Atlantic Coast is now salted by inshore fishermen in Newfoundland. Even in this inshore fishery, however, an increasing proportion of the catch is finding its way to freezing and filleting plants. At present salt fish production in Newfoundland is entirely a product of some 15,000 inshore fishermen and of almost as many small-scale enterprises.

3. The problem of greatest overall significance in the inshore fishery, generally on the Atlantic Coast, and especially in Newfoundland, is low landings per fisherman. The offshore fishery, where landings per fisherman are much larger, does not present the same problem.

4. During the past decade this situation has not improved and has actually deteriorated in the inshore fishery in Newfoundland. The catch of the inshore cod fishery in Newfoundland has declined slowly, despite a substantial increase in the number of inshore fishermen, and an expansion of their fishing power. As a result, landings per fisherman have diminished. The inshore fisherman who

salts his catch has less fishing time and consequently reduces his average landings. Productivity in the inshore fishery, already low, is even lower when the fisherman processes his own catch.

5. Studies⁽¹⁾ reveal that the inshore resource is limited and is influenced by the increasing intensity of fishing effort on the stocks in offshore waters. Already, this had led to a diminution in the size of fish, if not a decrease in their numbers. Without an abatement in offshore fishing effort there will be no sustained increase in the total landings of the inshore fishery.

6. The crisis in the inshore fishery is a limited resource and an excessive number of people dependent on it. In other words, the problem of low landings per inshore fisherman cannot be solved unless the number of fishermen is greatly reduced. While the inshore fisherman who salts fish may realize a marginal gain in yearly landings by selling fresh through the increase in his fishing time, the problem of low productivity will remain. The only opportunity for a substantial improvement in average landings per fisherman lies in the offshore fishery. Canada has an opportunity to greatly expand its share of the offshore catch to which it could deploy a part of though not by any means the entire surplus of manpower present in the inshore fishery.

7. The income obtained from fishing by the inshore fisherman is low commensurate with his low productivity. Average income from fishing is lower in Newfoundland than in the other Atlantic Coast provinces, because the inshore fisherman in that province not only catches less but also receives less for it. Average income per inshore fisherman in Newfoundland obtained from fishing has

(1) Molson, C.R., An Assessment of the Resource Inventory in Newfoundland Waters, St. John's, Newfoundland, December, 1963, pages 86-89.

remained constant during recent years, because the rise in fish prices has tended to compensate for the decline in average landings. Income from fishing accounts for only a small portion of the inshore fisherman's total gross income from all sources. Sample studies⁽²⁾ have revealed that in this province per fisherman's family only \$987* comes from fishing, compared with total income of \$2,309, including transfer payments and income in kind from commodities produced by themselves.

8. Provincial governments and the Federal Government are all sensitive to the low income derived from fishing by the inshore fisherman. Both levels of government have made available assistance by expanding opportunities for education and training, by providing grants for improving boats and gear and by extending credit facilities. In addition, the inshore fishery is subsidized in the form of the salt rebate, the bait service, unemployment insurance, relief payments, community stages and harbour developments. And yet, the problem of low productivity in the inshore fishery remains unsolved.

Salt Fish Production and World Trade

9. Canadian production of cured fish has declined since 1938 from 103,000** metric tons, product weight, to 65,000 metric tons in 1963. The output of salted cod and similar species amounted to 75,000 metric tons in 1938, and has fluctuated between 40,000 and 50,000 metric tons in the last four or five years. It is readily apparent from the relatively stable landings of cods, hakes, haddocks etc. in Canada, that an increasing proportion of the catch of these species has been frozen.

* The Commission recognizes that this figure is somewhat higher than the average for all inshore fishermen. A study by the Commission has shown that the average inshore fisherman realizes only \$762 from fishing.

** All weights in this section refer to product weights.

(2) Wise, T.F., Budgets, Credits and Skills Survey of Rural Fishermen, ARDA Project No. 1022 (Rev). St. John's, Newfoundland, 1963.

10. Canadian output of other cured fish products, such as pickled herring, has also shown a downward trend. Production equalled 17,000 metric tons in 1963 compared with 28,000 in 1938. Canada produces and exports a much smaller proportion of the world total of these cured products than for salted cod and similar species. Concerning competition between these two groups of salted fish products, information received by the Commission from the principal foreign markets indicates that in normal circumstances pickled fish does not significantly compete with dried and salted fish.

11. An analysis of the evidence produced in this report concerning world trade in fishery products reveals two things. First, world salt fish exports have been declining and, second, world fresh and frozen fish exports, competing for the same raw material, have been expanding.

12. Canada's position as a producer and as a trader of fishery products has declined substantially during the past 25 years. World production and world trade have risen rapidly while Canadian output and exports of fishery products remained relatively constant. Canada's position has deteriorated most noticeably in its landings of cod, hakes, haddock, etc. and in the production and exports of dried, salted or smoked fish.

13. Though world production of salted cod and similar species is increasing slightly, (see Appendix Table 11), world export trade in these commodities, if not downward, has at the best remained static. This means that consuming countries, often as a result of Government policies, have become more self-sufficient*. There is evidence (Portugal, Greece, Spain) that this tendency is continuing. This development coupled with the trend towards the consumption of alternative protein foods (frozen fish and poultry), indicates that total world export trade

* Imports into Greece, Italy, Spain and Portugal fell from 179 thousand metric tons in 1938 to 85,000 in 1963. Their combined population increased by about 9 million and their consumption of salt fish increased by 27,000 metric tons during the same period.

in salt fish will further decrease both in a relative and absolute way. There are signs that new markets might be established in continents like Africa but it is thought that these new demands will not be large enough to materially affect total salt fish exports, especially if the growing tendency towards frozen fish consumption in Africa is taken into account.

14. At present the salt fish market may be described as a "seller's" market. This has come about because world landings of fish for human consumption have failed to match population growth, and because an increasing proportion of the world catch was diverted to the fresh and frozen trades at the expense of the proportion salted. Consequently prices of frozen as well as salted fish have risen strongly during the past three or four years. It is however, a "seller's" market for "quality" and "kind" rather than quantity. This is shown by the fact that competitor countries, e.g., Norway, have imported crude saltbulk from Canada, have reprocessed it and marketed it in other consuming countries; countries which Canada used to supply.

15. While the long term trend of world exports of salt fish is downwards it is unlikely to proceed to a point where it entirely disappears, even though consuming countries increase greatly their self-sufficiency and much more use is made of alternative foods. There does and always will exist a demand in sophisticated markets for certain kinds of high quality salt cod fish, as for example, the 'Gaspe', 'Italian' and 'Spanish' cures which are commanding premium prices at the present time.

16. Canada has not taken maximum advantage of these small volume, high quality, markets, because of declining domestic production. The fishermen, who before produced light salted cures have turned to producing heavy salted saltbulk. Plant production of these light salted cures has not taken place to any extent. Canada, in the past almost the sole source of supply of genuine light salted fish, no longer holds this position primarily because its supply has declined.

17. In the meantime there are countries in the Caribbean and South America where in spite of a gradual rise in the standard of living there is still a demand for non-premium fish. This demand will continue for some time, though it may be expected to decrease unless measures are taken to adapt the product to new methods of merchandizing. The 'supermarket' approach is finding wider acceptance even in countries of low standard of living, and the requirement for this is a product which is attractively packaged and displayed. It is also possible that new markets for high quality products may emerge. The demand in the United States and certain European markets for premium salt fish might be expanded if the product were available and properly advertised. The industry has existed with remarkably little publicity for the consumer - mainly because of the uncertainties surrounding the quality of the product and the habit of the exporters to satisfy markets requiring cheap fish.

18. This, then, is the general setting against which Canada must face its salt fish problems. World export trade in salt fish has been declining. Canadian production and exports have been declining even faster, and are likely to continue to do so, due to the expansion in the fresh and frozen fish industry. There will always be a demand for salt fish although it will increasingly be restricted to small markets for high grade quality products. Under these circumstances, Canada's only opportunity is to increase the unit export earnings of its remaining salt fish production by improving quality and upgrading the product.

Salt Fish Production and Quality

19. The Commission realizes that in recent years the quality of salted fish products in Canada has not been good. The kind of salt fish has also deteriorated. More heavy salted rather than light salted fish has been produced and, of the heavy salted, an increasing proportion has been exported as salt bulk. The Commission recognizes this development as a preventable loss to the Canadian economy. An improvement in quality would stop this economic waste.

20. Bulk prices, F.A.S., of various grades of salted fish have varied widely on the market: in 1964 from approximately \$36.00 per quintal for 'Large choice' to \$10.00 for 'BIM'. Statistics are not available to show how much of each grade of salt fish actually has been produced. But if there were, judging from the export volume of high quality salted fish, it would be readily apparent that the value of Canadian exports would have been greater if the qualities had been better. The declining size of fish also has had a detrimental effect on the value of Canadian exports. The Commission has no doubt that if in the future the quality and kind of salted fish produced in Canada improves export prices on average will be higher.

21. The question then arises why the trade have not availed themselves of this opportunity by buying fish in the raw state and producing better salt fish. The answer seems to be that the exporter has preferred handling salt fish produced by fishermen, because this was more profitable than producing it himself. While 10 per cent of salt fish output in Newfoundland was manufactured in shore plants in 1960, this had dropped to less than 2 per cent by 1963.

22. Another reason is that unemployment insurance promotes the production of salted fish by the fisherman (Chap. 5) especially by marginal producers whose objective is to qualify for benefits as quickly as possible. This has been accomplished partly at the expense of the freezing industry. Although performing a useful social function, it also contributes to lowering the quality of salt fish. Usually less care is taken by marginal fishermen since they are often those who reverted to fishing when laid off from another job. There is no doubt that the scheme has also been an important factor in attracting men back into the fishery. Furthermore, by contributing to a diminished fishing effort in the autumn it has reduced the numbers of large fish which might otherwise have been taken. The question must be asked why the utilization of a resource must be subsidized by the rest of the workers of Canada when the cost of another means

of income support can be passed on to the foreign consumer by an alternative method of utilization.

23. Since the inshore fisherman does his own salting, the exporter has little control over the quality of the fish which he merchandizes. The culling operation carried out by the exporter is merely a sorting operation, and does nothing to improve quality. This has been determined before the fish reaches this level. Poor quality is a production problem not a marketing problem.

24. This poses the question as to how this trend to produce low quality can be reversed. In order to examine this question it is necessary to ask what constitutes quality in salt fish.

25. Healthy fish swimming in the sea are unspoiled and fresh. They may be of different size, at different stages in the reproductive cycle, and they may differ according to what they are eating. These things merely make them less or more desirable for manufacturing. But by and large the fishermen are aware of this and adjust their catching to these variables. It is desirable that the fish should be alive when taken from the water. But this depends upon how they are caught; for instance, fish caught in gill nets are often dead, enhancing bacterial invasion and spoilage. But the major damage is done after this. The rough handling, being stepped on and bruised, unloading by the use of the fork, being flung onto the dock all enhance bacterial spoilage and damage texture. Even though these things were eliminated there are a whole series of variables, such as splitting, washing, the quantity and kind of salt, drying weather, and storage temperature, which will, during manufacture, affect quality. Young⁽³⁾ has described them and concluded "with so many variables facing the producer of salt fish it is beyond reasonable hopefulness to expect

(3) Young, O. C., Controlled Temperature Processing and Holding Facilities for Perishable Products in Newfoundland, St. John's, Newfoundland, January, 1964.

uniformity, even if each individual processor applied all his skills and ingenuity in processing". Found⁽⁴⁾ describes things as they are and says "Processing in the hands of fishermen has created a situation where quality control and standardization of processing are almost impossible.

26. It must be emphasized that the imposition of culling and inspection cannot change the deterioration in quality which has taken place. Culling is merely a sorting operation on a product that is for the most part already spoiled. Spoiled in the sense that all of it would have been of better quality if more care, more labour and more skill had been put into it. But more fishermen's labour in manufacture means less time in fishing. The time has gone when he can depend upon his wife and children to 'make' the fish. So the fisherman has chosen to produce less light salted fish and more heavy salted fish. Unfortunately the fisherman's attempt to increase volume has resulted in a decline in the quality of both cures. As a consequence he has reduced Canadian export earnings.

27. It was said during the public hearings that if it were made possible for a fisherman to get more for high quality fish more of it would be produced. But under the conditions as described by Found and Young (para. 25) this would seem unlikely. As has been pointed out, inspection and culling would have little effect in changing quality. It must be remembered that inspection or culling does not place an obligation upon a fisherman to produce high quality, but simply puts his fish into certain categories. When one considers the great dispersion of fisherman throughout the area a system of carrying out inspection, culling, and policing would be very costly. With present methods of production

(4) Found, H.R., Production and Processing of Cod in Rural Communities in Newfoundland, St. John's, Newfoundland, October, 1963.

it is doubtful whether the increased value of the product would equal such costs.

28. If substantial improvement is to be made reform must be instituted in methods and procedures from the moment that the fish is caught and proceeded with up until the finished product is exported. The Commission notes that the quality problem is most pronounced in Newfoundland, Labrador and the North Shore of the Gulf where about 70 per cent of Canada's salt fish was made in 1963. The remaining 30 per cent was produced in the Maritime Provinces and the Gaspé coast of Quebec. In the Newfoundland, Labrador region 93 per cent was salted in fishermen's own primitive stages where the attainment of uniform good quality is impossible. In the Maritimes and Gaspé 89 per cent is salted in plants where, by virtue of their concentration on boneless and Gaspé cure fish, uniform quality standards are much easier to achieve.

29. There are approximately 320 salt fish premises on the Atlantic coast. The 105 which are in the Newfoundland, Labrador and Gulf North Shore region are neither physically capable of nor properly equipped to manufacture more than a very small portion of the output presently produced in the area by fishermen. On the other hand the 215 plants in the Maritimes and Gaspé already manufacture nearly all of the salted fish produced in these areas.

30. The Commission considers that in both Newfoundland and Nova Scotia existing mechanical salt fish dryers are being used well below their capacity. In Quebec there is also some excess capacity while in the remaining areas the situation is in fairly close balance.

31. During the public hearings, reference was made to the bad effects which resulted from 'cutthroat competition' amongst Canadian exporters. This occurs at two levels. First, there is competition between exporters to buy the fishermen's catch and second Canadian exporters compete against each other

in export markets.

32. In the former case the existence of a buyers' market will force the price to fishermen downwards and the supply being relatively inelastic some fishermen's stocks may not be sold. On the other hand, a sellers' market will have the opposite effect. Prices to fishermen begin to climb, and in fact this is what has happened in the past few years. Increasing competition among exporters to maintain their share of a dwindling volume of production had several years ago already pushed the price up higher than it should have gone. The pressure continued to increase however, particularly when Norway entered the market. Prices being already too high for the Caribbean market there was only one course open to exporters and that was to gamble by paying the same high price for all qualities, hoping to get a favourable outturn cull. This so called talqual buying was a result of the increased competition between exporters at the fishermen's level.

33. Competition between exporters for the available supply is healthy and should continue since it has benefited the fisherman producer by way of a higher price. Moreover, to the extent that no restrictions are imposed, it tends to make the whole industry more efficient by forcing out the weaker elements. On the other hand, a way must be found of preventing quality deterioration, since price differentials for quality fish are only an inducement and cannot alone overcome the problems inherent in a multitude of individual producers.

34. The extent of competition between Canadian exporters in foreign markets is not as widespread as indicated in the public hearings. In Newfoundland there are only two organizations carrying on large scale export operations. In Nova Scotia where individual firms do their own marketing there are many although the number is declining. In addition large firms have tended to purchase potentially competitive fish from small firms. This together with the increased

importance of the United States market for boneless fish has effectively removed many of the producer-exporters throughout the Maritimes from the Caribbean salt fish markets. Quebec does not compete in this connection since much of her heavy salted production is exported from Newfoundland and the Gaspe cure is a specialty product.

35. Cutthroat competition, occurring at times through sheer meanness, is usually caused by internal weaknesses giving rise to distress selling. Firms with inadequate resources to finance stocks of fish must borrow to pay operating expenses. The pressure becomes too great and they are forced into the market at sacrifice prices to the detriment of other exporters.

36. In export markets competition between exporters has at times of a buyers' market created serious problems. At present, however, conditions are those of a sellers' market and therefore cutthroat competition should not present any problem. To the extent that it does occur it is an indication of over-production of poor quality fish. By solving the quality problem cutthroat competition will largely disappear.

37. Central desk selling would be a further step to eliminate cutthroat competition. It would, however, also protect marginal producers and prevent the sound interplay of the forces which enable efficient firms to survive and inefficient ones to go out of business. Elimination of cutthroat competition is desirable, but the Commission feels not at the price of protecting inefficient manufacturers.

38. The preceding paragraphs outline the most significant production problems in the Canadian salt fish industry and show how they are related to the existing conditions in the industry itself. In addition to the problem of low productivity per unit of effort - perhaps the principal problem - the salient point is that cod presently salted by fishermen does not realize its

potential in that the product is not uniform and the quality is inferior. It is suggested that a correction of this is fundamental to any improvement in the returns from Canadian salt fish exports.

A National Salt Fish Marketing Board

39. In an attempt to bring about reform in the salt fish industry studies were made that resulted in a report entitled the "Newfoundland Salt Fish Marketing Report 1963"⁽⁵⁾. After reviewing conditions in the Newfoundland salt fish industry, with which description the Commission concurs, the report concludes that the solution to the problem lies in the institution of a Salt Fish Marketing Board, which would bring about a system of orderly marketing. This was to be achieved by, among other things, controlling exports of salt fish from the Atlantic provinces by central desk selling, guaranteeing minimum prices to fishermen according to the kind and quality of fish delivered, allowing margins to dealers and assemblers to purchase, to process and to store salt fish for the Board, and by establishing a method of sharing profits with fishermen.

40. The above-mentioned report lists the functions of the National Salt Fish Marketing Board.

The first of these functions is:-

"to provide a measure of price support* through a system of initial payments to producers, based on standardized grades".

This poses two considerations. First, what prices will furnish the basis of initial payments and second the standardization of grades.

(5) Newfoundland Salt Fish Marketing Report, 1963. By Hedlin-Menzies, Report prepared for ARDA, December 1963.

* The Commission infers that the term "price support" as used in the above quotation refers to price stability rather than price support in the sense that a subsidy is implied.

41. The first requires a prejudgment of the prices which will ultimately be received when the fish is finally exported. All the fish produced in the current year may not be exported until the following calendar year. Under these circumstances, without some control of the market, prejudging market prices is extremely difficult. The multiplicity of grades and sizes in salted fish presents a further technical difficulty. Second and more important, such a system of initial payments is held to be an instrument for directing production to satisfy market needs, and an incentive for better grades of fish. However, as pointed out previously, the quality of salted fish has been determined prior to this; in other words a system of initial payments to fishermen for salt fish produced by them will not solve the problem of quality production (para. 26).

42. The second function is:-

"to provide for pooling arrangements which would return to producers, on a pro rata basis, the realized returns from the sales from the particular pools to which they made delivery".

It is not immediately apparent how pooling arrangements can be made in the purchase of salt fish from the fisherman. The fisherman may sell his fish in various stages of manufacture. It may be heavy salted saltbulk which is a mixture of various qualities and sizes of fish to be subsequently finished and sorted into several of a dozen different grades. He may sell his fish as a finished product, hard dried, semi dried, light salted and so on. The idea behind pooling - which is borrowed from the Wheat Board concept - is that the producer shall, after expenses have been deducted when the product is finally sold, receive a share of the benefit from the sale of definite grades and qualities. This is comparatively easy in the case of grain because it is an unmanufactured, relatively unspoilable product and can readily be identified with its producer. To do this for a fisherman who is selling anything from a

semi-finished product to a completely finished product means the board will require a separate set of books for each fisherman and what will be manufactured from his fish will have to be recorded - an obviously impractical if not impossible task.

43. The third function is:-

"to provide stabilized, competitive export pricing, by means of industry-wide central desk selling, with any surplus over and above the initial price payment and handling, storage and administrative costs reverting to the producer."

Canada does not command a sufficient quantity of the various kinds and qualities of salt fish, under the present regime, to dominate world export markets, and therefore has no control over the return for its salt fish products. Consequently, pricing involves an adjustment of Canada's price to those offered by competing countries which may vary from time to time depending on the movement of trade and variation in demand. It is therefore difficult to see how central desk selling can achieve "stability" in price, though it can achieve 'uniformity' of pricing in one period.

44. The major difficulty lies in the distribution of any surplus value to the producer. The same difficulties are present in this as are present in 'pooling'. The Board does not know the eventual fate of the saltbulk fish they purchase from the fisherman nor will they be able to identify easily the producer. The alternative to this is to pay an arbitrarily fixed amount to each producer on a pro rata basis. This will, however, destroy the Board's price quality incentive.

45. The fourth and fifth functions are:-

(4) "to negotiate annually with the trade a fair and appropriate level of handling, storage and processing charges to cover the various grades and drieths and, in co-operation with the Salt Fish Inspection Board, to build in appropriate quality incentives."

- (5) "to become sole owner of all salt fish on delivery to buyer or processor; to arrange movement to various areas that could provide a central shipping point to market; to control export movements and sales; to assure adequate private or, if necessary, public terminal storage facilities and, in general, to control the product from fisherman to export market."

Taking (4) and (5) together it was found that most of the opposition to the Marketing Board idea centered on these provisions. These provisions take the private exporters out of the export business, all risks normally borne by the entrepreneurs are transferred to the public purse. Moreover, there will be an entire loss of the 'good will' asset which over the years has become attached to Brand Names*. Besides quality will remain as it is now.

46. The sixth function is:-

"to expand and develop markets in all possible and appropriate ways."

Since, as already pointed out, the volume of production and exports are more liable to decrease than increase, market expansion is not likely. The only hope of increasing the benefit from marketing is by making the product more valuable. None of the functions of the Marketing Board outlined, however, are specifically directed towards the improvement of quality - nor can they, since a marketing board is concerned principally with a system of marketing. It is true that such a system requires a uniformity of product. This and the improvement in quality are production and not marketing problems.

47. These are the recommendations of the Newfoundland Salt Fish Marketing Report and are the basis upon which a National Salt Fish Marketing Board was to be founded. But these, to be effective, require a prior solution to the problems connected with 'standardization', 'uniformity of quality and kind' and

* This might be prevented if an arrangement could be made to allow the former exporter to choose his semi-finished salt fish to finish it and dispatch it to a chosen market under the brand name.

'improvement in operation'. These things do not now exist.

48. This is recognized in the first part of the report which on page 31 says:-

"In its present state of disorganization, the Newfoundland industry is in no position to service its customers. It has lost entire markets to foreign competitors and witnessed the serious shrinkage of others because these competitors were able and prepared to deliver a product, that, in all particulars, met the customers specifications. Newfoundland exporters would gladly meet this competition if they could but they will be unable to do so until the industry is reorganized; this reorganization must travel from the point of export, back through the processor to the men who produce the fish.";

on page 46,

"Whether Newfoundland can secure the full advantage of a near monopoly in the production of the light salted product depends upon the production of a premium product (such as the Italian and Spanish cures) producing the extra returns to cover the extra costs involved. This cannot be achieved by returning the women and children to the flakes or other traditional techniques. It can only be achieved by new technological breakthroughs resulting in much higher levels of productivity in catching, as processing the fish.";

and again on page 70,

"The functions that must be performed to resolve the problems of grading and quality control are not in dispute. That these functions are not now being performed is equally clear. While the decision on the most appropriate mechanism for the performance of these functions remains a matter for Federal-Provincial agreement, the fact that nothing less than the structural reorganization of the salt fish industry is involved suggests there is a strong case for these functions to be assumed by a specialized agency which will be unencumbered by other duties.".

49. In other words the authors believe that the 'reorganization of the industry' and the necessary 'technological breakthrough' will not be affected by the Marketing Board itself. They suggest that a separate body be established

called the Salt Fish Inspection Board under the control of the Federal Department of Fisheries. However, the Federal Government had drawn up as early as 1962, that is prior to the preparation of the Newfoundland Salt Fish Marketing Report, draft Fishery Inspection Regulations to establish rigid standards of production. These proved to be unacceptable to the Provincial Government at the Federal-Provincial Atlantic Fisheries Committee Conference in 1962. One fishermen's representative is quoted as commenting that "regulations of this nature would put the fisherman out of business".

50. There is no doubt that a Marketing Board will furnish certain advantages in the sense that central desk selling will enable Canada to present a common front vis-a-vis competitive countries. It will also enable economies to be realized in the collection, storage and shipment of fish; it will avoid distress selling and 'playing the market' and it may make it possible to work out a system of guaranteed prices to the salt fish fisherman.

51. It is not so evident that such an establishment will succeed in raising significantly the quantity and the quality of Canadian salt fish production. This, as has been pointed out, is not primarily a marketing problem, but is one of production and in the opinion of the Commission is a prerequisite to any action in the field of marketing. More than financial incentives are involved in this. Were it not so the community stages which were donated by the Government would be properly used, and greater advantage would be taken of the various grants and loans that are already available to fishermen to improve their facilities (see para. 18 to 26). Even if such an improvement took place it is very doubtful whether sufficient uniformity of grade and quality can be produced (para. 26) considering that the fish is manufactured by thousands of individual fishermen and by the exercise of thousands of individual judgments.

52. A Salt Fish Marketing Board is by its very nature not an appropriate instrument for improving quality. An instrument for export marketing is not the most likely tool for solving a production problem, whether it is conceived under provincial or federal jurisdiction. Moreover, the Commission found no consensus in the Atlantic Provinces in support of a National Salt Fish Marketing Board.

53. The public hearings held by the Commission indicated this lack of consensus. The Government of Newfoundland strongly supported the establishment of a National Marketing Board as effectively "guaranteeing the rapid and progressive rationalization of the industry in all its phases". The representatives of the fishermen and a majority of the industry supported them in this view. The Government of Nova Scotia took no position as a government but was willing to let the industry speak for themselves. The industry, while they saw a necessity for some means of preventing 'cutthroat competition' between Canadian exporters was definitely opposed to the establishment of a National Salt Fish Marketing Board. The Government of the Province of New Brunswick, supported by the industry, felt that there was no need for a National Salt Fish Marketing Board at this time. The Government of the Province of Quebec also, was not prepared, for the time being, to support the creation of a National Salt Fish Marketing Board. They were supported in this by the industry and by the fishermen, as represented by their association. The feeling was that such a Board was unnecessary so far as Quebec was concerned.

54. Unless there is an assurance that Provincial Governments are seized with the necessity of creating a legal device under which a National Salt Fish Marketing Board could be established, and unless the majority of the industry and the majority of fishermen concerned will voluntarily co-operate, an attempt

to form it is not feasible. This is emphasized in the Newfoundland Salt Fish Marketing Report:-

"A Marketing Board, to be successful, must enlist the willing co-operation of the trade. The private fish companies must form, as agents of the Board, a vital part of the marketing system. The danger lies in the unintended impairment of incentives and in the damaging of the initiative of private companies, thereby failing to achieve their full co-operation. The whole system depends upon all segments of the industry - fishermen, private companies, the authority for grading and standards and the Marketing Board - working together as a single system."

55. In conclusion since a National Marketing Board cannot as claimed by the Government of Newfoundland 'guarantee the rapid and progressive rationalization of the industry in all its phases'⁽⁶⁾, and since there is no agreement among the provinces for its establishment, therefore, the Commission recommends that such a board be not established at this time.

A Salt Fish Manufacturing Agency

56. An answer to the problem of quality in salt fish production is to remove the manufacturing from the hands of the fisherman and transfer it to centralized plants. All fish to be salted would be purchased from the fisherman, gutted head-on.

57. The Commission realizes, however, that the removal of manufacturing from the fisherman raises a much broader consideration, namely whether the potential of the inshore fish resources will be more fully realized by salting than by freezing. The Commission has studied some aspects of this question, but feels that a more intensive investigation is required, before a definite position can be arrived at as to which method of utilization is more advantageous. Some tentative conclusions have, however, been reached.

(6) Transcript of Public Hearings, Page 21.

58. Frozen cod, a higher-priced product, in terms of fish input, benefits the Canadian economy more than salted cod. A pound of cod which is filleted and frozen realizes on average a greater return in export markets, than a pound of fish which is salted (Chap. VII). In fact all medium-sized and small cod return more when filleted and frozen, regardless of the cure. Moreover large cod returns more salted only when produced into high-priced high quality cures such as boneless, genuine Spanish or choice Italian.

59. The Commission recognizes that in certain areas of Newfoundland specifically the northern areas the profitability of freezing disappears. Greater seasonality of fishing, increased distances from markets, and icing conditions on the coast raise production costs of a freezing plant to a level which the market is unlikely to absorb under present circumstances. Salt fish production will therefore, be increasingly limited to the more distant areas. (Chap. VIII)

60. Having removed salting from the fisherman's hands as a prerequisite to improving quality of salt fish production in Newfoundland, the question must be answered whether private industry is capable of performing the salting function and of arriving at a uniformity of product through approved methods of manufacture. It is the opinion of the Commission that while some advance in this direction can be made by the existing processing industry, this progress is strictly limited by lack of salting capacity and other essential facilities in relation to current landings, and by the virtual impossibility of co-ordinating production among a large number of firms working independently.

61. Therefore the Commission recommends that an Agency*, possibly a crown corporation, be established for the purpose of salting fish in centralized plants. The Agency would inspect raw materials for freshness and quality. It

* The Agency could licence vessels to take part in the Labrador Floater Fishery.

would use skilful methods of manufacture of its various products and thereby secure production of uniformly high qualities in accordance with the regulations prescribed by the federal government. The initial capital for this Agency could be supplied on the basis of agreement between governments.

62. Such an Agency need not handle all salted fish products. Gaspe cure, boneless and other cures, in which there seem to be no outstanding problems either of production or marketing, can be exempted. But this would not preclude the Agency from undertaking manufacture of these products if it were deemed advisable.

63. The Agency, assuming it will operate on a sound business-like basis, would pay the fisherman a price consistent with its costs and anticipated market returns. The fisherman would then know in advance the minimum price at which the Agency was prepared to buy his fish. The Agency should at all times strive towards paying the fisherman a return for his raw fish equivalent to the return from filleting. If at this price all supplies offered cannot be salted profitably then the excess may be made available for filleting. This arrangement would also permit the exploitation of species which cannot be salted.

64. The Agency would sell its various salt fish products to Canadian exporters by tender or auction. If thought advisable, the Agency can also sell direct to foreign buyers. Any receipts above costs incurred, including initial payment to the fisherman, would be distributed at the end of the season in the form of a final payment to participating fishermen.

65. Location of the Agency's plants should be determined after a further survey. However, these plants need not in all cases be new. It is possible that certain existing plants be acquired by lease or by other means for use, with appropriate improvements, by the Agency. Some of the new plants can be

constructed so that with minimal expense they can be converted to freezing operations. Others can be constructed to perform both salting and freezing. Engineering studies will be necessary to properly cost these structures and to ascertain cost of manufacture. Costing studies have been made⁽⁷⁾ but the Commission had no opportunity of verifying them. The cost of a new plant capable of handling annually 40,000 cwt. of hard dried fish was estimated at \$280,000. As a matter of interest the cost of an average community stage handling about 10,000 drafts of saltbulk fish is about \$45,000. The total construction costs of plants capable of salting current salt fish production in Newfoundland and Labrador is estimated by the Commission to be about \$6 million. But the Commission emphasizes that it had no opportunity to verify these costs.

66. The powers of the Agency should be industry-wide in application and enforcement, if maximum benefits are to be realized. However, the plan is contingent upon the fisherman having, in terms of distance, ready access to an Agency plant for selling his raw product. The perishable raw fish will require several deliveries a week, compared with two or three per season for salted fish. In many areas fishing outposts are widely scattered. While road communications are improving they are still poor in many places. It is obvious, from the fishing point of view, that certain of the Agency's plants would have to be located in these areas to furnish the fisherman with the opportunity of selling his raw material. In certain instances it may be found that, in order for the plant to serve a wider area the operation of a collecting service would be desirable.

67. If after a careful survey of conditions it is found that, for the time being, the plan cannot be operated on a province-wide basis, certain

(7) Pike, A.P., Employment and Earning Opportunities, A Preliminary Report.
ARDA Study No. 1020, St. John's, Newfoundland, January 1964.

sections only might be taken. The extension of the plan into other areas would have to await improvement in communications. In other words gradual implementation may be necessary.

68. The Agency would be assisted by an Advisory Committee, representing fishermen, exporters and both levels of government. The Agency with the help of this Committee would judge prospective demands in various markets for the following season, using this information to govern its kind of production.

69. The Federal Government should also extend its Commercial Intelligence Service in order to obtain for the Agency and the Advisory Committee all relevant information concerning the trade in salt fish in all the principal export markets. This would include information about every delivery of salt fish from any source, the level of the stocks held and the wholesale and retail prices. This information should be made available promptly.

70. The application of these principles would have the following effects:-

- (a) It would ensure a uniform quality of manufactured salt fish products.
- (b) It would release the fisherman from the onerous tasks of manufacture and thus allow more time for fishing, thereby increasing his catch.
- (c) It would furnish a means of matching production of salt fish to a prejudged demand.
- (d) It would remove the problem faced by fishermen when they do not know what prices they will receive for their salted fish.
- (e) It would offer the fishermen a maximum share in the rewards from the sale of the salt fish produced.
- (f) It would leave the exporters free to use their skills in the actual marketing, and place upon them all the risks of such operations.
- (g) It would not prejudice the expanding frozen fish industry.

- (h) It would result in equality of treatment of fishermen with respect to unemployment insurance.
- (i) It would leave the disposition of fish between freezing and salting open to the free interplay of market forces.

71. The Commission wishes to emphasize that neither the establishment of an Agency nor the establishment of a Marketing Board will have any appreciable effect upon the most significant problem facing the Newfoundland, and indeed the whole of the Atlantic inshore fisheries; that is, a limited resource and an excessive number of fishermen dependent on it.

72. Moreover, even if the number of fishermen were sharply reduced, present capacity to catch will still remain limited by the current methods of inshore fishing. Only a radical change in the methods of fishing employed by the inshore fisherman, designed to increase productivity per unit of effort, will enable him to better significantly the reward for his labour.

CHAPTER II

HISTORICAL DEVELOPMENT OF THE ATLANTIC COAST FISHERY

Introduction

1. The Commission feels that in making its recommendations due notice must first be taken of the economic and social evolution of the Atlantic coast fisheries in order that the objectives may be properly oriented and their capacity for solving some of the industry's problems may not be over-estimated. Accordingly, although it has been written before, a brief analysis of the important developments leading up to the situation in which the industry finds itself today, will outline the framework into which the Commission feels its proposals would fit.

Early Development

2. France and Portugal, with cheap supplies of solar salt and low agricultural production, were the first to exploit the North American cod fishery resource. During the 16th Century both nations sent annual expeditions to conduct a shore fishery producing wet salted fish in Newfoundland. The Portugese concentrated on the Avalon Peninsula gradually forcing the French to the north and west. The English fishery developed rapidly after Portugal was absorbed by Spain (1581) and the defeat of the Armada (1588).

3. England's scarcity of salt forced her to produce light salted dried fish in the area between Cape Race and Bonavista. The French, on the other hand, had a good supply of salt and, drying the fish at home for the local market, had little interest in occupying the land. They developed instead the bank fishery and moved westward into the Gulf and Cape Breton.

4. The English expeditions at first brought the fish home for the local market, but they soon began exporting it. Later, ships from London

bought it in Newfoundland for direct export to the Mediterranean. This began the long struggle between settlers, fishermen from western England and trading ship interests. The latter promoted settlement since it was from independent fishermen that they bought their fish. The merchants sending fishing expeditions from England opposed it because the traders were competitors in the carrying trade. By 1650 the former were dominant.

5. Development of the New England fisheries followed the growth of the English fishery and the opening of the Spanish market after 1588. Slavery in Virginia and the West Indies associated with tobacco and sugar (1620-1650) provided a market for poor grades of fish. Growth of agriculture, lumbering and winter fishing favoured the rapid settlement of New England, while poor agriculture, seasonality of the fishery and continued control by English fishing merchants restricted settlement in Newfoundland.

6. French - English hostility retarded settlement in Nova Scotia in the first half of the 17th Century. The French, driven to the north and west, despite a shortage of good harbours and drying space, developed the fishery at Cape Breton, Caraquet, the Magdalen Islands, Faspébiac and Gaspé. This led to contact with the Indians and the beginning of the fur trade.

7. New England began to sell agricultural products in Newfoundland to finance imports from Europe. This encouraged settlement, competed with and weakened the English fishing interests and drew labour from Newfoundland to New England. The series of Navigation Acts (1640's - 1660's) attempted to counteract this but the decline of the English fishing ships continued and war with France (1689-96) encouraged the growth of the independent byboatkeepers.

8. The favourable geographical background of New England which

afforded year-round fishing and navigation, large timber resources, and good agricultural land, was exploited by aggressive independent entrepreneurs. Growth in this area was rapid. New England began competing with Newfoundland in European markets and, adopting smaller vessels for the bank fishery, she developed Nova Scotia as a base for drying fish.

9. In Newfoundland, migration of skilled labour to New England increased, leaving behind the less skilled, a factor which tended to raise costs and lower quality. This, together with market competition from the French, caused severe difficulties.

10. The early fishery, based on annual expeditions from England and France practiced a specialization of labour. Each vessel's crew was divided into groups assigned to specific duties, such as operating the vessel, catching the fish in small boats, and curing the catch. The proceeds of the voyage was divided on a share system upon return to England. (The European factory trawlers of the 1960's could be regarded as a modern version of this system.) The growth of settlement, conflict for space in the good harbours, weakening of the fishing ship interests in England and other factors, caused this type of enterprise to take up the bank fishery, and move to more northern areas. Gradually competition for labour with the byeboatmen and New England compelled them to depend on unskilled labour hired for wages in Newfoundland and Ireland. As a result quality of bank and northern fish declined. Quality fell and prices followed. Only the byeboatmen with their efficient economic unit of about three partners and several servants, were able to thrive in these conditions and they increased from 286 in 1716 to 554 in 1751.

11. This fundamental change in the system took many years to evolve. It was hastened by the Treaty of Utrecht in 1713 which, by forcing France to

give up Newfoundland, enabled the English fishery to expand northward. As the fishing ships moved to more remote areas and settlement expanded a merchant class handling supplies in exchange for salted fish grew up and in the distant outports the fishing ships became trading ships.

12. The Treaty of Utrecht, reducing French pressure, released the dynamic economy of New England into expansion. New England fishermen quickly occupied the Nova Scotia fishing grounds in their small schooners. Louisburg was captured in 1745 and Halifax was founded four years later.

13. The Treaty of Paris in 1763 reaffirmed French rights to the shore fishery in Newfoundland and gave her St. Pierre and Miquelon, but she was excluded from the shore fishery in the Gulf and Cape Breton. This meant in Newfoundland, a shift of the English fishery from the northeast coast to Labrador; and in the Gulf, interests from the Channel Islands, Halifax, Quebec and New England competing to take over the French fishery. Channel Island interests with their bilingual character and European connection were, however, better suited to take over than New England. The latter lacked European market connections and shipped well over half of its exports to the Caribbean.

14. The development of Nova Scotia proceeded rapidly during and after the American Revolution. Military expenditures, restrictions on New England in the fisheries and in the West Indian trade, and the conversion of Nova Scotia from an outpost of New England to an outpost of Old England created much prosperity. Her fishery expanded, and she took over part of the West Indian trade from which the Americans had been excluded.

15. In Newfoundland, the American Revolution, by cutting off trade in fish and supplies, created hardship. However, the Treaty of Versailles (1783) excluded France from the northeast coast of Newfoundland and the indigenous fishery expanded northward.

16. The recovery of the American fishery was slow but by the early 1800's Americans were actively exercising their fishing rights in the Gulf and on Labrador. The Treaty of Ghent, ending the Napoleonic Wars, and subsequent agreements excluded the Americans from the Gulf shore fishery but gave them fishing rights on the west coast of Newfoundland, the Magdalen Islands and Labrador. However, increasing competition in European markets from the recovering French fishery and from Norway and the growing importance of the home market led on the one hand to concentration by the New England fishery on Caribbean markets and on the other to growth in the catch of species such as mackerel, herring and halibut. The former created conflict with Nova Scotia in the fisheries and carrying trade in which Nova Scotia steadily lost ground, driving her into Confederation. The growth of the American fresh fish market constituted the beginning of the modern era in processing.

17. In the Gaspé, northeastern New Brunswick and Cape Breton the many small firms which took over in the 1780's and 1790's benefitted by high prices during the Napoleonic Wars. However, competition from the Americans after 1818 weakened them, particularly in Cape Breton which joined Nova Scotia in 1820. Many firms in the Gulf amalgamated. In the Gaspé, where fisheries remained subordinate to agriculture in administrative policy, the monopoly of the Jersey merchants was strongly maintained.

18. Marketing difficulties in the 1780's, and later the Napoleonic Wars and subsequent growth of the French fishery, caused Newfoundland to become more dependent upon West Indian markets bringing her into conflict with New England and Nova Scotia. Her bank fishery declined, the vessels moved north to Labrador and more labour emigrated to Nova Scotia. The residents, to save the cost of hired labour, began fishing as family enterprises. St. John's merchants consolidated their hold over the fishery by selling supplies at high

prices and pricing cod so that debts would just be cleared. In the more distant outports the byeboatmen and fishing ships became the local merchants. It was out of this system that the strong conservative characteristic of the Newfoundland industry quite naturally grew.

19. The American fishery expanded rapidly in the early 19th Century. Vessels fished on the banks with hand lines and also in the Gulf and on Labrador. Better boats, cheaper local supplies and the share system improved efficiency faster than in for instance the Nova Scotian fishery. Nova Scotia fishermen could earn more money on American vessels, and left. Their places were taken by men from Newfoundland in a pattern which has characterized development in the region's fisheries ever since.

20. In the 1850's the Americans, following the French example, began using trawl lines in the bank fishery. The consequent rise of the herring fishery and development of the bait problem in Nova Scotia and Newfoundland had important political consequences during the second half of the century, particularly in Newfoundland. Meanwhile, the American domestic fresh fish market had been growing. The opening of the west after the Civil War gave it further impetus. By 1870 Americans had ceased fishing in distant regions like Labrador and their bank fishery supplied the expanding fresh fish market. This development contributed to the abrogation of reciprocity (1883), and the eventual withdrawal of the United States from the Caribbean salt fish trade. Its place was taken in this market by Nova Scotia.

21. In Newfoundland at the primary level and in the markets, the struggle against the subsidized French fishery continued. Competition from Norwegian fish and the growing Portuguese fishery intensified the problem. Use of large-scale methods such as seines and (later) cod traps reduced the quality of the cure and kept prices down. With no alternative activities to supplement the economy, such as agriculture or a fresh fish market, Newfoundland was almost

entirely dependent on trade in salted cod. Even the resource itself was cause for concern. The journal of the House of Assembly in 1864 recorded that during the period 1840-1862 production increased very little while there had been a great increase in population. During this period commercial interests in St. John's expanded and consolidated their position, and the stage was set for the evolution of the current problem.

New England

22. The expansion of the United States economy and growth of the domestic market enabled the New England fishing industry to develop ahead of that in Nova Scotia and Newfoundland. With the construction of railways and the growth of the Atlantic Coast population demand pressed upon supply. Fish prices and earnings increased, labour and fresh fish moved from Nova Scotia to New England and in turn labour moved from Newfoundland to Nova Scotia. The Boston Fish Market was established in 1910 and by that year landings of salted fish in New England had fallen to 1% of the total. The introduction of the first trawler in 1905 and of the first diesel engine in about 1912, heralded the decline of wooden sailing vessels and the hook and line trawl fishery on the banks. Filleting was introduced in 1921 followed shortly by quick freezing. These innovations reduced the volume and weight to be transported and further extended the United States domestic market for fish and frozen fish.

23. These changes which involved a shift in the capital-labour ratio of the groundfish industry caused financial difficulties. From this emerged large-scale integrated companies with the capital resources to finance large boats and costly processing plants. With this development the industry became centralized in a few large ports such as Boston and Gloucester.

24. Growing industrialization and later, depletion of the nearer fishing grounds, were accompanied by a rising cost structure. Against this, American

fishing interests succeeded in maintaining a tariff to keep out imports of cheaper fish, delaying development in Nova Scotia, Quebec and Newfoundland.

The Maritime Provinces

25. By 1910 most schooners from ports in southwestern Nova Scotia, such as Digby and Yarmouth, were landing fresh fish from adjacent banks. Fresh halibut and salted fish from the Gulf and more distant areas were also brought in. The Lunenburg fleet continued to land only salted fish for the West Indian market until about 1925 at which time a number of firms entered the frozen fish business. A few years later that port had the largest fleet landing fresh fish in the Maritimes. However, the inshore fishery in remote regions and some of the bankers remained in the salt fish industry for many years.

26. Supported by preferential duties in Jamaica and direct steamer service from Halifax, Nova Scotia continued to dominate the West Indian salt fish market until the 1930's when Newfoundland competition became severe. During the same period the Canadian industry shifted utilization over to fresh and frozen fish which, in spite of the tariff, was exported to New England and shipped to growing domestic centres like Montreal. In 1920, 80 per cent of groundfish landings were salted. By 1939 this had fallen to 54 per cent. During the same period the utilization of groundfish landings in the fresh and frozen form rose from 9 per cent to 34 per cent.

27. Capital investment in boats and cold storage plants increased. American banking vessels were bought by Nova Scotian fishermen who, by not changing the registry, could land fish directly in United States ports, thus getting higher prices and paying no duty. Trawlers were first used in 1908 but, as in Norway, hostility from inshore fishermen succeeded in having regulations passed limiting their numbers and restricting their operations

to beyond a certain distance from the coast. The frozen fish industry developed from a nucleus of fishermen's bait depots built with government assistance after 1900. Some of these were taken over by private companies to produce for the local market. From 1909 to 1918 Canada paid a subsidy for transporting fish by rail to the inland domestic market. During and after World War I, backed by American and Canadian capital large integrated processing plants were constructed in centres like Halifax and Ganso in the same way as in New England.

28. Although increasing numbers of inshore fishermen were disposing of their catch in the fresh state, it was not until World War II that any further significant expansion in frozen fish production took place. Under the impetus of wartime controls and the Government's efforts to increase food supplies the fleet of large trawlers was greatly expanded. In addition, direct subsidies as well as loans to fishermen promoted the growth of a fleet of vessels of the long liner and dragger type of 45' to 60' in length. Many inshore fishermen obtained employment on these vessels taking different species of fresh fish and their dependence on salted cod was correspondingly reduced.

29. In the post war period the proportion of groundfish salted in the Maritime Provinces has continued to decline. In New Brunswick salted cod accounted for 74 per cent of landings in 1950, compared with only 14 per cent in 1962. In Nova Scotia where about half the fish put to salt is destined for the high priced boneless trade, 22 per cent of groundfish landings is salted. The proportion of cod and scalefish landings put to salt in Nova Scotia is now relatively stabilized at about 40 per cent.

Quebec

30. Throughout the 19th Century the Jersey merchants dominated the Quebec fisheries in a manner not unlike the English merchants did in

Newfoundland. Gaspé and Paspébiac became the main trading centres during that century which was on the whole prosperous. Supplies were sold to fishermen at high prices and fish was taken in return at relatively low prices. Even though under this system most fishermen had to remain in debt to one merchant for lengthy periods, towards the end of the century increasing numbers became owners of their own boats. Growing competition from outside firms such as Gorton Pew forced the price of fish up and increased the use of cash. In the abortive Revolt of Rivière au Renard in 1909 the fishermen showed their resentment towards the treatment they received under the old system.

31. During World War I prices were high, but the closing of the Italian market which took most of the Gaspé cure caused great difficulties in 1921. Nova Scotia was also affected but unlike Quebec, she was developing her fresh fish market and was not entirely dependant on salted fish. In 1922 as a result of these problems the Quebec Government took over administration of its fisheries, and attempts were made to build up fishermen's co-operatives. Direct exports to Italy were resumed and conditions improved until the depression, when the Italian market was again closed.

32. Quebec's failure to develop the domestic market for fresh and frozen fish is generally held responsible for the severity of conditions in the fisheries during the 1930's. Development of the frozen industry was retarded by competition from Nova Scotia, lack of capital and poor transportation facilities. After 1930, however, a program to strengthen the co-operatives and increase the production of frozen fish was undertaken. In 1932 assisted by a subsidy amounting to 75 per cent of the construction cost, the first frozen fish plants were built and in 1936 one million pounds were marketed.

33. In 1939 various co-operatives were grouped into the Quebec United

Fishermen which, after a difficult beginning, is now a federation of twenty-five co-operatives with a membership of 2,000 fishermen. It handles about 35 million pounds of fresh fish nearly 75 per cent of which is cod, and it owns and operates three frozen fish plants and five salt fish plants all except one on the Gaspé coast.

34. In the post war period the Quebec Government greatly extended its role in fisheries development. It has supported the construction of freezing and salt fish plants and by means of loans, grants and other media it has built up a sizeable fleet of druggers and trawlers. As a result, the portion of the landings taken by small inshore boats has declined and the species mix has increased; fishermen's dependence on salt fish has been reduced, their incomes have gone up and their numbers have gone down. Finally salted fish production has declined significantly, while that of frozen fish has gone up (see Table VIII, Chapter VI).

Newfoundland

35. In Newfoundland, the problems of an economy based on a single export staple continued long after they had retreated from the other regions, except the fishing areas of Quebec. The last twenty years of the 19th Century were marked by efforts to exclude the French, Americans and Canadians from the Newfoundland fishery and to increase the catch. The latter resulted in a decline in quality and lower prices. Heavy railway debts precipitated the bank crash in 1894 and serious depression followed. The situation was worsened by overstocking of the markets through increased consignment sales, and an increase in production of soft cured fish following the introduction of cod traps. A trend toward decentralisation was evident as retail trade spread more to the outports and wholesale trade became centred in St. John's. However, the individual fishermen remained financially dependant on, and usually in debt to their local merchant.

36. In 1911 the first attempts were made to form marketing groups. This became unnecessary when prosperity returned with increased demand, and with higher prices during World War I. After the War, control boards were set up in the importing countries. As a counter measure, in 1919, Newfoundland attempted to regulate exports by setting up the Cod Fish Exportation Board. Minimum prices were established for certain markets, export permits were required and Trade Commissioners were sent out. However, the plan fell through since it was an innovation and because the Italian market collapsed in 1920. Competition from other producing countries, particularly Iceland and Norway, added to Newfoundland's difficulties in the European markets. The price of fish dropped by 50 per cent and many businesses failed. The attempt to control exports had little effect even at a time when Newfoundland produced 25 per cent of the total world output and controlled 30 per cent of the quantity entering international trade.

37. While Newfoundland continued to buy obsolete banking schooners from Canada, the French were beginning to fish on the banks with trawlers. Iceland, which had 47 trawlers by 1925, and Norway were also mechanizing their fisheries. In both countries processing had been centralized in plants where quality could be controlled and utilization of tongues and roes could reduce overhead costs. In Newfoundland, where each fisherman caught and cured his own fish, quality control and the use of by products other than oil were impossible, and the conservative attitude and lack of capital in the industry tended to perpetuate the status quo.

38. Market difficulties in Europe after 1920 and particularly during the depression, caused Newfoundland to enter the West Indian market. There she competed successfully with an eventually displaced Canadian fish in the same manner that Canada had taken over this market from New England

about 40 years before. The period between the two wars was one of difficult and painful adjustment in Newfoundland and also in Nova Scotia.

39. To alleviate the situation the Commission Government in Newfoundland took various steps mostly intended to regulate exports, control quality and assist the primary industry. These had some effect but the basic problem remained. Salted fish is a commodity which is marketed in relatively poor countries dependent on agricultural exports to finance salt fish imports, while supplies of food, clothing and fishing equipment are imported from the high cost economy of North America. Furthermore, salted fish has to compete with other food products being produced by increasingly mechanized low cost methods. The demand for salted fish is therefore relatively elastic while the supply is not. With the growth of industrialization in food production, new methods of fish catching, processing, distributing and marketing were developed, international trade became more sophisticated and large national companies became larger, international concerns.

40. The shore fisherman and most of the salt fish processing industry, so long the victim of their conservative short-sighted outlook, and lacking capital failed to adjust to the changing conditions and persisted in their efforts to combat market difficulties by producing more salted fish. The individualistic spirit was too strong to permit the development of co-operatives or even a co-operative spirit among the fishermen. The initial results of the Community Stage Program bear ample testimony to this. Among the exporters also individualism has prevented amalgamation or co-operation in the fish business unless it was forced upon them by regulations. As a result much government assistance has been required in marketing and more recently in supplying capital resources for development, as well as in the administration of income support programs.

41. The growth of the fresh and frozen fish industry in Newfoundland came considerably later than in New England and Nova Scotia but more or less paralleled that in Quebec. As in Nova Scotia, bait freezers were the first cold storages to be erected. One was installed at Fogo and in 1918 Harvey and Company built another at Rose Blanche. In the same year a freezing plant went into operation at St. John's. The prosperous times in which these plants were built did not last, and very little came of them. Although the Commission Government built a plant in La Foile Bay and started the Bait Service in the middle 1930's, it was not until the outbreak of World War II, and the resulting increase in demand for food, that the frozen fish industry began to expand. From 1939 to 1945 production rose from 1.6 million pounds to 35.8 million pounds and in the latter year 18 freezing plants were in operation. Many of these were operated by companies in the salt fish export business located in the southern part of the island. Both the number of plants and total production declined immediately following the War but began rising again after 1950. During the 1950's expansion was greater on the northeast coast, while in the 1960's it has been in the southern part of the island associated with offshore fishing. In 1964, over 30 plants produced 83.1 million pounds of frozen fish, more than 90 per cent of which was exported, an indication of how the lack of a domestic market held back growth of this industry.

42. In the catching sphere also development came later in Newfoundland than elsewhere. While engines had been installed in inshore boats as well as in bank and Labrador schooners at about the same time as in Nova Scotia, the first trawler was introduced by the Commission Government only in 1935. This vessel fished for cod which was mostly salted and it was not until

the expansion of the freezing industry that trawlers and draggers came into more general use. In 1948 ten were operating; by 1958 there were 27 and in 1963 this had increased to 42. The resulting increase in productivity was great. In 1953, 4 per cent of Newfoundland fishermen operated in vessels of over 25 gross tons and took 14 per cent of the total catch, while in 1962 offshore fishermen were only 3 per cent of the total but took 24 per cent of the Province's landings. Paralleling this development there has been a steady decrease in salt fish production.

Summary

43. It should now be obvious as to what have been the main factors which have influenced economic growth in the East Coast fishing industry. While the fisheries of Newfoundland were the first to be exploited they are the last to have become developed. Many Newfoundland inshore fishermen are fishing today in the same way and with the same equipment, except for the engine in their boats, as they did over 100 years ago. Developments leading to the modern era began in New England, spread to Nova Scotia and finally reached Newfoundland. The New England development would never have taken place without the growth of other sectors of her economy and the consequent increase in her domestic fresh fish markets. The growth of the fresh fish market meant higher prices, increased turnover, greater capital accumulation and consequently enhanced ability to adopt new, more costly and more efficient techniques. Fresh fish was followed by frozen fish, further extension of the markets, growth of large integrated companies and the rapid adoption of new technology in catching as well as processing. As prices rose in the United States labour and fish were drawn from the adjacent lower wage and lower cost economy in Nova Scotia. In the decade before World War I many schooners fishing out of southwestern ports were bringing in iced fish while

those further east at Lunenburg were still salting their catch.

44. From Nova Scotia development proceeded into Newfoundland but not until much later, when wartime conditions increased the demand for food supplies. Newfoundland's geographical isolation, the existence of Nova Scotia between her and the United States, lack of diversity in her economy and other factors beyond her control prevented any development of the fresh fish trade. The same factors as well as the lack of capital also precluded development of the frozen fish industry until much later than in the other regions.

45. In retrospect as the fresh and frozen fish industry advanced northeastwards, the salt fish industry has retreated. Newfoundland can be regarded as the last stronghold of salt fish production and even here this has now receded largely to the more remote areas on the northern coasts and Labrador, areas which for economic reasons modern technology has not yet reached and where socio-economic problems increase with the increasing out-port population. Changes in marketing followed a similar pattern. New England, turning to her domestic demand for fresh fish and later frozen fish retired from the Caribbean salt fish market. Her place was taken by Nova Scotia and finally Nova Scotia was displaced by Newfoundland. This was made possible by a change in the utilization of the catch following a shift in demand, which in turn enabled an increase in productivity in catching and processing. The increased productivity meant greater specialization of labour and eventually the substitution of capital for labour. The Commission feels that the only course to be taken is that which will hasten this natural process, particularly in those regions which have been least affected.

CHAPTER III

THE WORLD FISHERY

1. Canada's output of salted fish is sold mostly in foreign markets. The current situation of the export-oriented salt fish industry, as far as marketing and markets are concerned, is, therefore, mainly a reflection of events in the world market for fish products. A study of this world environment, that is of global developments in fish output, fish utilization patterns, and trade, is therefore a prerequisite for determining the direction of future market development by the Canadian industry.

World Catch

2. The world fishery, in terms of total catch, has expanded rapidly during the past 25 years. The total catch of fish has more than doubled from 20 million metric tons, live weight, in 1938 to 46 million metric tons in 1963.

3. All continents participated in the expansion of the world fishery. South America and Africa, however, were the only continents to increase their share of the total world catch. North America and Europe have become relatively less important in the world fishery, evidence of the gradual relative decline of the fishery in the North Atlantic. Although its total catch increased during this period from 3.2 million metric tons to 4.3 million metric tons, North American production declined from 15 per cent of the world total in 1938 to 9 per cent in 1963.

4. In terms of species landed the most significant increase occurred in the global landings of herring, sardines and anchovies. The landings of these species increased from 4.7 million metric tons in 1938 to 14.8 million metric tons in 1963. The major contributing factor was the growth of the

anchovy fishery in Peru, which in turn was the main factor responsible for the growth in the relative share of South America in the world fishery.

5. Of particular significance to the work of this Commission is the relative decline in the world landings of cods, hakes, haddocks and related species. These are the main species which are salted in Canada today. Landings of these species of fish increased from 2.8 million metric tons in 1938 to 4.9 million metric tons in 1963. In relation to the total world catch, however, cod, hakes, haddocks, etc. have declined from 13 per cent to 10 per cent.

6. Europe, with total landings of 2.2 million metric tons in 1963, continues to account for the largest proportion of the total catch of cods, hakes, haddocks, etc. Its relative position, however, declined from 58 per cent in 1938 to 45 per cent in 1963. The decline in the landings of these fish was particularly sharp in the Federal Republic of Germany and in the United Kingdom. On the other hand, Spain, Portugal, and Denmark were most successful in increasing their share of this fishery.

7. North American landings of cods and related species have also declined relative to the world total. In 1938 this continent landed 19 per cent; by 1963 this had declined to 11 per cent. Even in absolute terms, North American landings expanded very little during the last 25 years, amounting to about .6 million metric tons annually.

8. The decline in the proportion of the world catch of cods, hakes, haddocks, etc., landed in Europe and in North America was offset by the expansion of this fishery in Japan and in the Soviet Union. These two countries together accounted for one-third of the world output of these species in 1963.

Utilization

9. Significant changes have occurred in the pattern of utilization of the world catch. These changes, starting to emerge prior to World War II,

took place mostly after 1950. While increasing amounts are for human consumption, it is noteworthy that the trend in the proportion of the world catch utilized for this purpose has been downward. An increasing percentage of total landings is reduced to fish meal and other fish solubles which are used as high-protein feed additives. In 1963, 27 per cent of the world catch was reduced to fish meal compared with 15 per cent in 1952. The expanding use of fish for reduction purposes was primarily due to the rapid growth of the anchoveta fishery in Peru of which almost the entire landings are used to produce fish meal.

10. The consumption of fish in the fresh state has declined in relation to total world landings. Freshness is inversely proportionate to distance, and consequently fresh consumption depends upon proximity to fishing areas. Since fishing is becoming more concentrated, fewer people have ready access to fresh fish and more people consume fish in the processed state. The percentage consumed fresh dropped from 41 per cent in 1952 to 35 per cent in 1963. Despite this decline marketing for fresh consumption remains the most important form of utilization.

11. The proportion of the world catch which was frozen has risen rapidly. This growth was facilitated greatly by the establishment of the "cold chain". Ten per cent of the world catch was frozen in 1963, compared to 4 per cent in 1952.

12. As an increasing proportion of the world catch was frozen, relatively less was cured. The volume of fish cured in 1963 represented 18 per cent of the total world catch of fish, a sharp decline from the 26 per cent cured in 1952.

Production

13. Human consumption* of fishery products has expanded by some 65 per cent since 1952. In 1963, 33 million metric tons of fish, landed weight, were utilized for human consumption, compared with 20 million metric tons in 1952. The rate of increase was well in excess of the population growth, indicating that per capita consumption of all fish products has increased during the past decade or so. The trends in utilization make it clear that world output of fresh and frozen fish products has grown very rapidly during the past decade.

14. During this time very little growth has occurred in the output of cured fish products. While the world output of dried, salted or smoked fish more than doubled since 1938 from 1.2 million metric tons, product weight, to 3.0 million metric tons in 1963, most of this increase in production took place, however, between 1938 and the early 1950's. Per capita consumption of cured fish products, which rose until the early fifties, has since that time declined.

15. Following the late thirties, the main increase in production occurred in miscellaneous dried or salted fish products. World output of this category of cured fish products increased from 382,000 metric tons in 1938 to an estimated 1,335,000 metric tons in 1963. There was during the same period also a significant increase in production of cured herring products from 488,000 metric tons to 1,177,000 metric tons. The group of cured fish products which showed the least growth in production was dried, salted or unsalted cod and similar species. The output of these products increased from 375,000 metric tons in 1938 to an estimated 473,000 metric tons in 1963. It would appear that while per capita production and consumption of all dried, salted

* Lacking data on the volume of fresh fish which was marketed, world production of all fishery products, product weight, for human consumption is not available.

or salted fish products started to decline only after the early 1950's the downward trend in per capita consumption of salted or unsalted cod, hakes and haddocks was of much longer duration.

International Trade

16. During the past 25 years there has been a steady increase in the proportion of the total world catch which enters international trade. In 1949, 19 per cent of the catch of 140 countries was exported. In 1963 the same countries exported 37 per cent of their catch. The main reason for this expansion in international trade relative to output was the growth in the production of fish meal and other fish solubles. With production of these fish products increasingly concentrated, a growing proportion has entered international trade. Other categories of fish products such as fresh, chilled and frozen fish have also become more prominent in international trade. Dried, salted or smoked fish was the only category of which a declining proportion of output was exported.

17. Total world exports of fishery products amounted to 2.1 million metric tons in 1938. By 1963 this had risen to 5.3 million metric tons. Fish meals and solubles which accounted for less than 10 per cent of world trade in 1938 increased to one-third of world trade in 1963. Exports of frozen, chilled or fresh fish increased from 20 per cent of world trade in 1938 to almost 30 per cent in 1963. In contrast, exports of dried, salted or smoked fish declined during the same period from one-third of total world trade in fish products to but little more than 10 per cent.

18. Exports of fresh, chilled or frozen fish rose from 415,000 metric tons in 1938 to 1,403,000 metric tons in 1963. World trade patterns in these products have changed substantially during the past 25 years. North America has experienced tremendous growth as a net importer and Asia as a net exporter.

North American imports exceeded exports in 1963 by 172,000 metric tons compared with 8,000 metric tons in 1938. When one considers that Canada is a net exporter of some 135,000 metric tons of chilled or frozen fish products then it is readily apparent that other North American countries, largely the United States of America, are net importers of some 300,000 metric tons of fresh and frozen fish. Asia, chiefly Japan, has become the largest net exporter. In 1963, this continent had net exports of 174,000 metric tons compared with a balanced trade position in 1938. The large and growing import needs of the United States for fresh and frozen fish products are primarily supplied by Canada and Japan. Europe's position as a trader of fresh and frozen fish shows no definite trend. A net importer prior to the Second World War, Europe became a substantial net exporter during the late 1950's, and has since reverted again to a net import position.

19. As mentioned previously world trade in salted, dried or smoked fish has declined in relation to world output of these commodities. This is primarily because importers are becoming more self-sufficient, particularly countries such as Spain and Portugal. Exports of cured fish declined from 678,000 metric tons in 1938 to 541,000 metric tons in 1963.

20. The sharpest decline occurred in world exports of dried and salted herring. Exports of this group of commodities amounted to 311,000 metric tons or 64 per cent of world output in 1938. By 1963, exports had diminished to 93,000 metric tons or 11 per cent of world output. Almost equally extensive was the decline in world trade of salted or dried cod, hakes, haddocks, etc. In 1963, the volume exported totalled 195,000 metric tons, accounting for 45 per cent of world output. This compared with an export volume of 233,000 metric tons or 69 per cent of world output in 1938.

21. World trade patterns for cured fish products in 1938 were substantially different from those existing in 1963. North America and Europe were, 25 years ago, the only net exporters of these fish products. During the succeeding 25 years North America became a net importer and the Soviet Union, the largest net importer prior to 1957, became a net exporter. Another noteworthy development was the substantial growth of Africa as a net importer, mainly Nigeria. South America has also shown a moderate upward trend as a net importer.

22. The preceding sections indicate the general direction of a number of developments in the world fishery. Briefly these developments are:-

- (1) an upward trend in the total landings of all species of fish;
- (2) a downward trend in the proportion utilized for human consumption, inasmuch as reduction of fish to meal and other solubles has relatively expanded, primarily because of the development of the Peruvian anchoveta fishery;
- (3) an upward trend in the proportion of world landings which are being frozen;
- (4) a downward trend in the proportion of the world catch which is cured;
- (5) an upward trend in the per capita consumption of fresh and frozen fish products;
- (6) a decline in the per capita consumption of salt fish products since the early 1950's; this downward trend being of longer duration for salted and dried cod, hakes, haddocks, etc.;
- (7) an upward trend in the proportion of the world output of frozen fish and a downward trend in the proportion of the world output of cured fish which enter international trade.

The Current Situation

23. During the last three or four years there have occurred a number

of significant deviations from the trends outlined above. While world landings of fish continued to rise during 1961, 1962 and 1963, at possibly an accelerated rate, the diversion to non-human consumption accounted for almost 80 per cent of the increase. Consequently the supply available for human consumption has increased less during the past few years. Per capita production for human consumption probably declined, which, in view of a rise in potential per capita demand, improved greatly the producer's position in the world market.

24. This relative tightness in supply appeared initially in the market for fresh and frozen fish products. The growing acceptance of frozen fish in Europe, following the establishment of the "cold chain" stimulated the demand for chilled and frozen fish products. European freezings rose rapidly, even though European landings increased little. This shift in utilization appears not to have been adequate to meet demand. Europe, a net exporter of 57,000 metric tons of fresh, chilled and frozen fish in 1959, had average annual net imports of 7,000 metric tons during the following four years.

25. In other areas of the world a similar phenomenon occurred. Africa, prior to 1961 a net exporter, has since become a substantial net importer of fresh and frozen fish. Oceania increased its net imports as well. And North America, a net importer of 145,000 metric tons in 1960, increased its net imports by 27,000 metric tons, to 172,000 metric tons in 1963. This situation has placed exporters of fresh, chilled and frozen fish (Japan, Denmark, Canada, Sweden and the Netherlands) in a stronger bargaining position. Consequently, prices of these fish products have risen substantially in recent years.

26. The increase in freezings resulted in considerable pressure on the supply of fish available for salting. This was particularly evident in Europe, other than Italy, Spain, Portugal and Greece. (Italy, Spain, Portugal and Greece increased their output of salted fish substantially during 1961, 1962

and 1963. These countries did not, however, relieve a growing tightness in the international supply of salted fish by cutting their net imports but rather aggravated the situation by increasing consumption). Production of dried, salted or smoked fish in Europe, excluding those four countries, declined from 586,000 metric tons in 1959 to 520,000 metric tons in 1962, a drop of 66,000 metric tons. Canadian production of cured fish declined from 100,000 to 85,000 metric tons, the entire decline being in the output of salted groundfish.

27. The lower output of cured fish by these main producing regions resulted in a substantial decline in net exports. This decline, occurring much more rapidly than during the past twenty-five years, generated an upward pressure on the price of salted fish. This in turn caused net exports of salted fish from Europe to rise in 1962 and 1963, at the expense of domestic consumption. Canadian output and exports of salted fish also turned up. The interplay of these various supply and demand factors led to a new equilibrium between frozen fish products and salted fish products at a higher price level.

28. The price of fish products, particularly of cured fish products, cannot, relative to other food prices, increase much beyond the present level, otherwise increased substitution by the consumer will precipitate lower levels of consumption, relieving any relative deficiencies in available supply. On the other hand, only a substantial increase in the world catch of fish for human consumption will again reduce fish prices to the level prevailing prior to 1959. While an expansion of the world catch is conceivable, it will depend primarily on new rules and agreements pertaining to the development and realization of the potential of the world's fishing grounds.

CHAPTER IV

CANADA'S POSITION IN THE WORLD FISHERY INDUSTRY

1. Canada's position* as a producer and as a trader of fishery products has declined substantially during the past 25 years. World production and world trade have risen rapidly while Canadian output and exports of fishery products remained relatively constant. Canada's position has deteriorated most noticeably in its landings of cod, hakes, haddock, etc., and in the production and exports of dried, salted or smoked fish.

Landings

2. Canadian landings of all species rose from .8 million metric tons in 1938 to 1.2 million tons in 1963. The world catch increased from 20 million metric tons to 46 million metric tons during the same period. Canada's share of the world catch declined consequently from 4.1 per cent to 2.6 per cent.

3. The East Coast fishery has accounted for between 60 and 70 per cent of total Canadian landings. In 1963 this amounted to 650,000 metric tons. The fishery on Canada's Atlantic Coast has also declined in relation to the world fishery.

4. While the overall position of Canada as a fishing nation has diminished, it has become more prominent as a producer of flounder, halibut and sole. This improvement can be attributed primarily to the East Coast fishery, which now lands 60 per cent of the Canadian total of these species.

* References to any year prior to 1949 include Newfoundland.

Previously, this was mainly a West Coast activity. Total Canadian landings of flounder and similar flat fish, which accounted for three per cent of the world total of these species in 1938, represented almost 9 per cent of the total world catch in 1963. Landings on the Atlantic Coast constituted almost 7 per cent of the world total. The remarkable expansion of this fishery in Canada, particularly on the Atlantic Coast, is a reflection of the development of offshore fishing.

5. The Canadian performance in the world salmon industry has changed little, Canada accounting for between 10 and 19 per cent of the world output. Almost the entire Canadian catch of salmon occurs on the West Coast. Moreover, a very small proportion only is cured. Consequently the salmon fishery is not a significant factor in any deliberations concerning the salt fish industry on Canada's East Coast.

6. The herring and sardine fishery is presently the largest Canadian fishery in terms of volume of landings. Compared with the world herring fishery, however, the Canadian volume is relatively small and has, moreover, declined. Canadian landings of these fish amounted to 374,000 metric tons in 1963, a substantial increase from the 200,000 metric tons landed in 1938. Nevertheless, because of the phenomenal expansion of this fishery elsewhere, particularly in Peru, the Canadian share dropped from 4.2 per cent in 1938 to 2.5 per cent in 1963. In 1938 almost half of the total Canadian landings of herring were caught on the Atlantic Coast. By 1963, this had dropped to 31 per cent. It can be seen that the relative decline of the herring fishery was more pronounced for the Atlantic Coast than for the West Coast.

7. Canada suffered its major decline in its position in the world fishery of cods, hakes, haddocks, etc. In 1938, Canadian landings of these fish accounted for 12 per cent of the world catch, compared with less than eight per cent in 1963. While the world catch increased from 2.8 million

metric tons in 1938 to 4.9 million in 1963, Canadian landings of these species, 369,000 metric tons in 1963, have remained about the same.

8. In conclusion, the Canadian fishery and the Atlantic Coast fishery are no longer as important a factor in the world fishery today as twenty-five years ago. The relative decline in production has been evident particularly on the East Coast for cod and herring. This development is significant for the Canadian salt fish industry because these species have been its basic raw material. Moreover, the cod fishery has become increasingly a Newfoundland activity, and primarily that of inshore fishermen. Consequently, the economic impact resulting from the relatively weaker position of Canada as a producer of cod is confined largely to the salt fish industry and the inshore fisherman in Newfoundland.

Pattern of Utilization

9. The trends in Canada's pattern of utilization parallel the changes which have occurred on a world-wide basis during the postwar period. The proportion of the catch which is frozen has increased, and the proportion which is salted has declined. Moreover, the downward trend in curings in Canada has been sharper than in other fishing nations.

10. Canadian utilization differs from the world pattern in that a larger proportion is still salted, and a larger proportion is frozen. This is, however, not surprising because with a small domestic demand for fresh fish, most of the catch is processed and exported. For the year 1962, Canadian curings utilized about 22 per cent of the Canadian catch whereas on a world basis only 17 per cent was cured. Freezings accounted for almost 30 per cent of the Canadian catch compared with only 9 per cent of the world catch.

11. With most of Canada's population concentrated in areas far removed from the principal sea-fishing areas, the percentage of total landings which is marketed fresh in Canada is much less important than for the world as a whole. In Canada about 17 per cent of total landings is marketed fresh whereas the corresponding figure for the world fishery is 36 per cent.

12. Canning has become a less important form of utilization in Canada during the past 10 to 15 years. This is primarily because the Canadian catch of salmon has become a smaller proportion of the total Canadian catch. In 1962 almost 10 per cent of the Canadian catch was canned, not much different from the proportion of the world catch which was canned.

13. The amount of fish used for reduction purposes in Canada has remained relatively unchanged. This form of utilization is less important in Canada than for the world as a whole. Canada reduces some 20 per cent of its catch to fish meal and other fish solubles compared with 27 per cent for the world catch.

Production

14. It is readily apparent from the preceding description of Canada's position in the world fishery that Canadian output of fishery products has not kept pace with world output. Canadian trends in utilization indicate that this applies particularly to the production of salted, dried or smoked fish products, mostly salted and dried cod. As a producer of frozen fish products, Canada's position has, however, declined as well. While the proportion of the Canadian catch which has been frozen has expanded rapidly, the increase in the volume has lagged the growth in world output, because of the slow growth in the Canadian catch.

15. Canadian output* of fishery products amounted to an estimated 270,000

* These production figures exclude the volume of fish marketed fresh, whole or round and are expressed in terms of end-product weight.

metric tons in 1938. In 1953, Canadian production totalled 267,000 metric tons and increased subsequently to 370,000 metric tons in 1963. Canadian production of frozen fish rose sharply from around 55,000 metric tons in 1938 to 144,000 metric tons in 1963. The volume of salted, dried or smoked fish products dropped during the same period from 103,000 metric tons to 65,000 metric tons. Canadian production of canned fish and shell fish has shown very little change, totalling 49,000 metric tons in 1938, 52,000 metric tons in 1953, and 41,000 metric tons in 1963. Canadian output of other fishery products, that is oils, fats and meals, increased from 69,000 metric tons in 1938 to 120,000 metric tons in 1963.

16. The drop in Canadian production of salted fish occurred in both the output of salted and dried cod and similar species and in the output of salted, dried or smoked herring and other pelagic fish. Canada produced 48,000 metric tons of salted cod, hake, haddock, etc., in 1963, well below the 1938 output of 75,000 metric tons. Over the same period of time Canadian production of salted, dried or smoked herring and other pelagic fish declined from 30,000 to 17,000 metric tons.

17. World production of dried, salted or smoked fish rose from 1,245,000 metric tons in 1938 to 2,985,000 metric tons in 1963. Canada produced close to 8 per cent of the world output of salted fish in 1938. By 1963, this had fallen to 2 per cent. In relation to world production of salted dried cod, hakes and haddocks, etc., Canada produced 10 per cent in 1963 compared with 22 per cent in 1938. Canadian production of salted, dried or smoked herring declined relative to total world output as well. Canadian production of these latter products is, however, relatively insignificant in relation to the world total: in 1963 less than 1 per cent.

18. In summary it is clear that the Canadian position as a producer of fishery products has declined substantially. Whereas Canada once held a dominant position as a producer of salted cod, this is today no longer so.

Trade

19. Canada's position as an exporter of fishery products is more significant than its position as a producer. This is so because Canada consumes a smaller proportion of its output than most other fishing nations. It is, however, readily apparent from the foregoing section that Canada's position as an exporter has declined.

20. The relative decline of Canada's position as an exporter has occurred in relation to frozen fish products as well as salted, dried or smoked fish products. Canadian exports of frozen fish products have risen less rapidly than world trade, and Canadian exports of salted, dried or smoked fish have declined more rapidly.

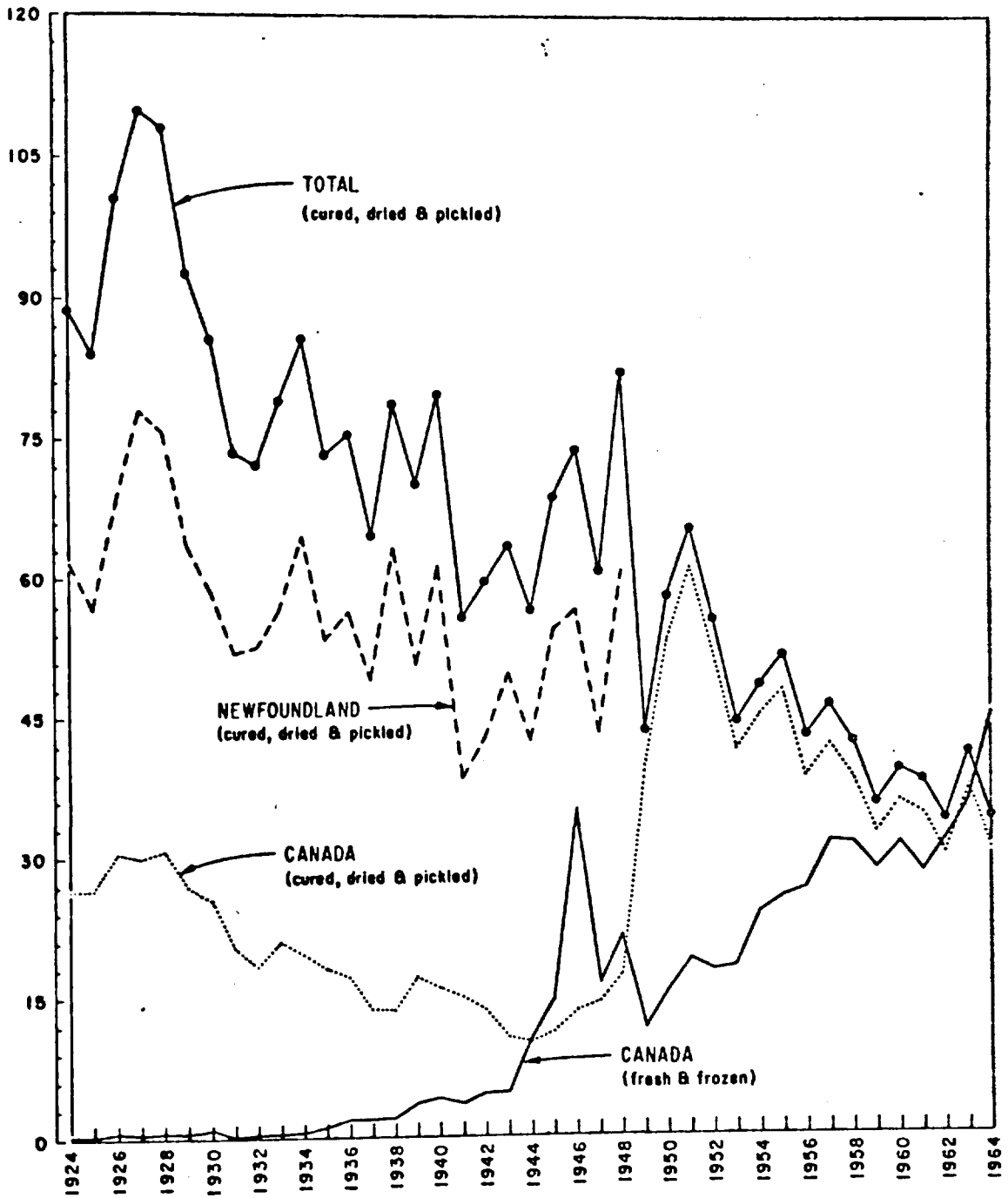
21. Canadian exports of fresh and frozen fish amounted to 97,000 metric tons in 1948 or 13 per cent of total world exports of 672,000 metric tons. By 1963, Canadian exports of frozen fish products had increased to 243,000 metric tons which, however, made up only 10 per cent of world trade. Canadian exports of dried, salted or smoked fish totalled 62,000 metric tons in 1963 or 11 per cent of world exports of 540,000 metric tons. This compared with 107,000* metric tons or 14 per cent of the world total in 1938 and 126,000 metric tons or 21 per cent in 1948.

22. The decline in Canada's position as a trader of salted, dried or smoked fish products took place for both salted cod, hakes, and haddocks, etc., and salted herring and other pelagic fish. In 1938, Canadian exports of salted

* Excludes trade between Newfoundland and Canada.

CANADIAN EXPORTS OF CODFISH 1924 - 1964

In Thousands
Metric Tons



cod and similar species amounted to 81,000 metric tons or 35 per cent of total world exports of 233,000 metric tons. By 1963, this had dropped to 48,000 metric tons or 25 per cent of the world total. While Canada's position as a trader in salted herring and other salted pelagic fish has not been as important, here also there has been a deterioration. In 1938, Canadian exports amounted to 44,000 metric tons or 13 per cent of the world total. By 1963, this had declined to 14,000 metric tons or 6 per cent of the world total.

23. Concerning the direction of Canada's exports of fishery products several noteworthy developments have taken place. In 1938, almost 90 per cent of Canadian exports of fresh and frozen fish and shellfish, 53,000 metric tons, went to the United States. This accounted for more than three-quarters of that country's import requirements of these products. In 1963, Canada exported 150,000 metric tons to the United States, still 90 per cent of total exports of fresh and frozen fish and shellfish. However, now this supplied but little more than one-third of that market. The United States imports of fresh and frozen fish rose during this period from 67,000 metric tons to 415,000 metric tons, more rapidly than Canadian output of these products. Despite the significant shift in the Canadian pattern of utilization towards freezing, Canada has been unable to satisfy its major customer and this customer has had to depend increasingly on other foreign suppliers for its import needs.

24. The total import demand for salted fish in Canada's three main traditional market areas, Europe, the Caribbean and the United States, declined from 445,000 metric tons in 1938 to 345,000 in 1963. Imports into Europe and the United States declined, but the Caribbean import market expanded significantly from 49,000 metric tons to 77,000 metric tons. Whereas the drop in United States imports is indicative of a decline in consumption, lower

European imports reflect higher levels of production in the main consuming countries of Spain, Portugal and Italy.

25. Canada exported a larger proportion of its total exports of salted fish to these three main market areas in 1963 but supplied a smaller percentage of their total import requirements. In 1938, Canadian exports of salted, dried or smoked fish to Europe, the Caribbean and the U.S.A., totalled 93,000 metric tons, 88 per cent of total Canadian exports and 21 per cent of their total import requirements. Twenty-five years later these three regions imported 57,000 metric tons of salt fish from Canada, 93 per cent of total Canadian exports, but only 16 per cent of their import requirements.

26. The Caribbean area purchased 45 per cent of Canada's exports of salt fish in 1938. By 1963, while the actual volume had declined from 47,000 metric tons to 33,000 tons, Canada sold 54 per cent of all its salt fish in this area. Canadian dependence on this market had increased. Nevertheless, the proportion of total Caribbean import requirements supplied by the Canadian industry dropped from 98 per cent in 1938 to 43 per cent in 1963. In fact, in order to have supplied 98 per cent of the Caribbean import needs in 1963, the entire Canadian output of salt fish would have been required, and more. Obviously the Canadian position in that market declined in part because the supplies were not available.

27. Canadian exports to Europe have declined more rapidly than total European import requirements. Moreover, that market has taken less of total Canadian exports. In 1963, Canadian exports of salted, dried or smoked fish to Europe totalled 12,000 metric tons, less than 20 per cent of total exports, compared with 33,000 metric tons, equivalent to 31 per cent in 1938. Europe was traditionally a market for light salted shore cured cod, a high grade,

high priced product. The supplies of this product have gradually decreased, as more fishermen have turned to the production of heavy salted cod, which involves less labour and less risk. Consequently, while competitors may have caused the erosion of the Canadian position in the European market, a smaller supply of the commodity required has been a major factor as well.

28. Canada shipped a larger percentage of its salt fish export to the United States in 1963 and supplied a greater proportion of that country's import requirements than in 1938. In 1963, Canadian salt fish exports to the United States totalled 12,000 metric tons, or 20 per cent of total salt fish exports. In 1938, that country purchased 13,000 metric tons but only 12 per cent of Canada's salt fish sales. Whereas in the former year Canada supplied 30 per cent of all United States import requirements, by 1963 this had risen to 36 per cent. The main salt fish product purchased by the United States is boneless cod, a high priced commodity.

29. Canadian exports of salted, dried or smoked fish products have declined more rapidly than the import requirements of its main market areas. Quality deterioration and price considerations have contributed to the declining market position of Canada. On the other hand, it is obvious that responsibility lies also with a decline in available supplies.

CHAPTER V

THE PRIMARY FISHING INDUSTRY

In the previous two chapters the world market for fish products was surveyed as changes in the global environment are for the Canadian fish industry the major factors which determine the direction of market development and the choice of marketing organization. A dynamic extension of markets, in terms of area and product, and suitable marketing techniques are necessary for the fish industry to be successful in maximizing its return from exports. The volume of exports, however, depends on landings, and in turn therefore, on the efficiency of the Canadian fishery. Efficiency not only concerns obtaining the maximum yield from the stocks of fish, while at the same time maintaining these stocks, but also minimizing effort in catching. Aside from natural or climatic factors effort is a function of fishing technology and the number of fishermen. Limiting itself to the Atlantic Coast fishery, this chapter looks into the number of people engaged in fishing, their landings, the extent to which fishermen process their own catch, and the return to the fisherman from both fishing and processing.

Employment

1. The total number of people engaged in fishing, full-time, part-time or on a casual basis in the Atlantic Provinces and Quebec numbered 48,000 in 1963. There were 21,400 fishermen in Newfoundland or about 45 per cent of the East Coast total. The Maritime Provinces accounted for 22,800 fishermen or 47 per cent of the total, with Nova Scotia, New Brunswick and Prince Edward Island having 28 per cent, 13 per cent and 6 per cent of the East Coast total

respectively. Quebec in 1963 had 3,700 fishermen or 8 per cent of the total.

2. The number of people engaged in fishing in 1963, less than one per cent higher than in 1958, were about 7 per cent higher than the total in 1961. In other words there has been a substantial increase in the number of fishermen during the past three or four years. In the Maritime Provinces the number has remained practically unchanged during this period. In Quebec there were 1,700 fewer fishermen. It can be seen that the entire increase occurred in Newfoundland, where 3,100 more people have engaged in fishing since 1958.

3. In Newfoundland a large number of people have entered the fishery on, at least, a part-time basis, because of a lack of alternative employment opportunities. This was particularly so during the years 1957 and 1958. The fishery in Newfoundland, much more so than elsewhere on the East Coast, is an activity where unemployed hide by being under-employed. The increase during recent years in Newfoundland, in part the result of the growth in the labour force, was, however, mostly due to the increase in fish prices and the extension of unemployment insurance to fishermen.

4. The inshore fishery, in terms of number of fishermen engaged, continues to dominate fishing on Canada's East Coast. More than 85 per cent of the total number of fishermen, or 42,500, fished inshore in 1963, while 5,400 fished offshore. Significant, however, is the sharp increase in the number of offshore fishermen from 3,300 in 1958, while the number of inshore fishermen actually declined somewhat.

5. Nova Scotia's fishermen, compared with the other East Coast provinces, are least dependent on the inshore fishery. In this province more than 20 per cent of the total number of fishermen are engaged in the offshore fishery. The inshore fishery is most important in terms of employment in Newfoundland and Prince Edward Island where 97 per cent are inshore fishermen.

6. In relation to the total labour force the fishery is least significant in Quebec, employing 2 per cent of the total labour force in 1963, and accounts for the largest proportion, 16 per cent, in Newfoundland. In the Maritime Provinces, Prince Edward Island, Nova Scotia and New Brunswick, 5 per cent of the labour force is engaged in fishing.

Landings

7. The total catch of all species by the East Coast sea fishery has, with annual fluctuations, shown a more or less stable trend during the last 10 years. The average for the period 1959-1963 was 1,323 million lbs., which was only marginally higher than the average of 1,317 million lbs., landed during 1954-1958.

8. Groundfish accounted for better than 70 per cent of total landings in 1963. Pelagic and estuarial fish represented somewhat less than 25 per cent and molluscs and crustaceans for slightly more than 5 per cent.

9. Among groundfish species, cod has lost ground to such fish as plaice, haddock and flounder. Landings of herring have become more important among pelagic species. The change in the composition of the catch reflects the increasing importance of the offshore fishery on the East Coast.

10. Cod landings averaged 590 million lbs. during the five years 1959-1963, some three per cent less than the 609 million lbs. landed during the period 1954-1958. Ninety per cent or more of the cod caught on the Atlantic Coast is landed in Newfoundland; 535 million lbs. in 1959-1963 compared with 559 million during the previous four-year period. As a result of the demise of the schooner fleet, inshore cod in Newfoundland has become relatively more prominent, at present accounting for over 95 per cent of all Newfoundland cod landings.

11. Among the provinces on the East Coast, Newfoundland accounts for the largest proportion of fish landings, some 40 per cent in 1963. Nova Scotian landings represent close to 30 per cent, New Brunswick 17 per cent, Quebec nearly 10 per cent and Prince Edward Island slightly better than 3 per cent.

12. Whereas the volume of landings increased only marginally during the past decade, the landed value has increased some 24 per cent from an average of \$52 million during 1954-1958 to \$64 million in 1959-1962. It is evident that the average return to the fishermen has improved considerably in recent years.

13. On the East Coast the provincial distribution of the total landed value indicates that Newfoundland fishermen receive much less for their total catch in relation to volume than fishermen in other provinces, and that the proportionate increase in landed value in that province during the past five years has been considerably less than in other provinces.

14. Newfoundland, in 1962, landed 40 per cent of the total volume but received a mere 26 per cent of total landed value. The three Maritime Provinces received two-thirds of the landed value for only half the catch. Quebec catches almost 10 per cent in volume and receives but 8 per cent in value.

15. The differences in these data can be mostly explained by the fact that the higher value molluscs and crustaceans account for a larger proportion of total landings in the Maritime Provinces than in Newfoundland and Quebec. However, even excluding this high value category the difference between shares in volume and value landed remains, indicating that Newfoundland fishermen receive less for their fish than fishermen in the Maritime Provinces.

Landings Per Fisherman

16. Average landings of fish per fisherman on Canada's East Coast have shown little change, averaging annually about 28,000 lbs. for the years 1958 to 1963. Provincially, comparing the annual averages for the period 1961-1963 with 1958-1960, landings per fisherman have declined in Newfoundland and in the Maritime Provinces by 6 per cent and 3 per cent respectively. In Quebec on the other hand, landings per fisherman increased by nearly 75 per cent.

17. In Newfoundland despite the increase in the number of fishermen, and hence despite the greater fishing effort, total landings have remained stable. Consequently, landings per fisherman have declined. It is the opinion of the Commission that no evidence can be presented that supports a fisheries development program based on the premise that total inshore landings can be significantly increased on a sustained basis.

18. In the Maritime Provinces, despite a slight reduction in the number of fishermen, landings dropped proportionately more. Consequently, the average catch per fisherman declined. On the other hand, landings per fisherman in Quebec rose by almost 75 per cent, due partly to an increase in total landings but primarily because of a one-third reduction in the number of fishermen. As a result landings per fisherman in Quebec for the period 1961-1963 were higher than for the Maritime Provinces and for Newfoundland.

19. In assessing the significance of the preceding data concerning average landings two other factors are of importance. First, landings per man engaged in offshore fishing exceed the inshore performance by a wide margin, and second, the number of offshore fishermen has increased greatly, especially in the Maritime Provinces. Consequently, if landings per inshore fisherman could be calculated, the decline in Newfoundland and in the Maritime

Provinces would have been much greater than that indicated by the overall figures, and the increase in Quebec would not have been as substantial.

20. In Newfoundland, for which such data is available, landings per inshore fisherman were less than 22,000 pounds in 1963 compared with almost 190,000 pounds per offshore fisherman. Moreover, average landings per inshore fisherman for the period 1960-63 were almost 20 per cent lower than during the preceding four years, while average landings per offshore fisherman increased by nearly 9 per cent.

Landed Value Per Fisherman

21. The Newfoundland fisherman on average catches less fish per year than his colleagues elsewhere on the East Coast and receives a lower price. Consequently the landed value of the fish caught by the Newfoundland fisherman is substantially lower than in the Maritime Provinces and in Quebec.

22. The landed value for the average fisherman in 1963 was \$2,180 in the Maritime Provinces, \$1,533 in Quebec and \$954 in Newfoundland. In the latter province the landed value for the average inshore fisherman was \$762 and \$6,062 for the offshore fisherman.

23. Although the landed value data are gross figures and have not allowed for the costs incurred in fishing, it is nevertheless clear that the net income to the offshore fisherman whether self-employed or employee is several times larger than that for the inshore fisherman. Moreover, while it can be said with reasonable certainty that inshore fishermen in provinces other than Newfoundland have average landings as low if not lower in weight, their return from fishing is likely to be higher because of higher prices in general and because of a higher value catch such as molluscs and crustaceans.

In addition, outside Newfoundland, the income from fishing can more readily be supplemented by income from other employment. In Newfoundland on the other hand, the inshore fishery is, for two-thirds of the fishermen, a full-time occupation, and depends primarily on low-value cod, with alternative or supplementary employment opportunities difficult to come by.

Processing by the Fisherman on the East Coast*

24. Removed from consumer markets, and having a perishable product the fisherman was forced to salt and dry his own fish. This processing provided additional income, a factor of great significance in an economic environment where supplementary employment opportunities are lacking.

25. On the other hand, processing by the fisherman restricts production. Fishing time is reduced substantially. Heading, splitting, washing and salting operations must take place as soon as the fish is landed. In addition the optimal drying period overlaps considerably with the fishing season. As a result the total volume landed by the inshore fisherman is considerably lower when he processes his fish than when he sells his catch unprocessed.

26. Another problem connected with salting by the fisherman is quality control. Working conditions and practices vary from one fisherman to another. The control of quality under these conditions is impossible. The most that can be done is to grade and inspect the salted product. This is, however, of no consequence to improving quality inasmuch as the damage has already been done.

* A more detailed description of processing by fishermen can be found in Chapter VI, "The Salt Fish Processing Industry of the Atlantic Provinces and Quebec".

27. Processing by fisherman reduces output, and leads to poor quality, which means that the full potential, in terms of the market value of the final product, has not been realized.

28. In each province the fisherman, traditionally, processed his entire catch by salting, smoking or drying. However, with the advent of refrigeration and rising standards of living, an alternative method of utilization developed, namely filleting and freezing. This enabled the fisherman to spend more time fishing, to increase his catch, and to maintain his income while dropping the processing function. Also supplementary employment opportunities arose which offered additional income well in excess of the return possible from processing.

29. Filleting and freezing, and the process of industrialization, first on the New England Coast of the United States, edged up into Nova Scotia, New Brunswick, Prince Edward Island, and Quebec. This movement up the Atlantic Coast occurred as demand for frozen fish expanded so that increasing amounts of transportation costs could gradually be absorbed. In the Maritime Provinces as a result of this development, by far the largest proportion of the catch is no longer processed by the fisherman. The inshore fishery is primarily as part-time occupation, supplemented by other employment. Full-time fishing is mostly offshore fishing, where earnings are more or less comparable with income from other economic activities. In the Maritime Provinces processing by the fisherman, and inshore fishing as a full-time occupation, or as a sole means of income, remain in a few isolated areas only.

30. In Quebec, while freezing and filleting has had an impact, processing of fish by fishermen remains substantial in such areas as the North Shore of the Gulf of St. Lawrence and the Gaspé Peninsula. In these areas fishing,

primarily inshore fishing, remains the sole source of income, as supplementary employment is limited. The offshore fishery provides full-time employment to relatively few fishermen. Rather than becoming full-time offshore fishermen an increasing number of people have chosen to leave the fishery entirely. Full-time employment opportunities in other economic areas have arisen more rapidly in Quebec than in the Maritime Provinces, or in Newfoundland.

31. Processing by the fisherman is still very much prevalent in Newfoundland, and is confined entirely to inshore fishermen, salting mostly cod. In 1963, of total landings of 373 million pounds of cod, inshore fishermen salted almost two-thirds. Half of this they dried as well. In other words filleting and freezing, absorbing the entire offshore catch, utilizes little better than a third of the inshore catch.

32. Processing makes a considerable contribution to the gross income of the fisherman. For instance in 1963, saltbulk prices to the fisherman were about \$16.50 to \$18.50 per draught of 224 lbs., which is equivalent to 3.4¢ to 3.8¢ for each pound of fish put to salt. Light salted fish, grading Madeira (75% small and 25% medium size), returned to the fisherman from \$16.25 to \$18.25 per quintal of 112 pounds, or from 3.6¢ to 4.1¢ per pound of fish put to salt. If one assumes that the average price at filleting and freezing plants was 3.0¢ per pound, then the fisherman received from .4 to .8¢ per pound for making heavy salted saltbulk and from .6 to 1.1¢ per pound for making light salted fish.

33. In 1963, fishermen processed some 115 million pounds into light salted fish, and some 110 million pounds into heavy salted fish. The additional income for processing this fish would be about \$1.6 million.

34. For those who salt, the additional income from processing would average out at about \$140 per fisherman. However, it is estimated that the

fisherman who salts fish landed in 1962 some 19,000 pounds compared with 26,000 pounds for the inshore fisherman who does not salt his catch. Accordingly the income for the inshore fisherman who salts was \$710* in 1963, compared with \$780** for the fisherman who does not salt. It appears that the income from processing does not offset the smaller catch. It would seem that processing by the fisherman not only restricts his output but also his income.

35. In view of the economic circumstances outlined above, and with the arrival and expansion of filleting and freezing plants in Newfoundland, particularly on the South and East Coasts, processing by the fisherman has diminished steadily during the past decade, and is increasingly confined to the North-East Coast and Labrador.

36. The advent of filleting and freezing was responsible for the major decline in processing by fishermen. Filleting and freezing provided an alternative means of utilization, which enabled the fisherman to sell unprocessed, thus increasing his catch and improving his income position. In 1957, fishermen salted more than 72 per cent of their cod landings compared with less than 55 per cent in 1964.

37. Processing by the fishermen declined in another manner as well, namely by a diminution in drying. Increasingly fishermen have salted fish only, selling it as heavy salted saltbulk. The volume dried by fishermen has declined greatly. This operation has been left increasingly to mechanical dryers in Newfoundland and Nova Scotia (or abroad, because increasing amounts of saltbulk have been exported). In 1953, about 75 per cent of fish salted by inshore fishermen was dried by them as well, compared with 50 per cent in 1963.

* 19,000 x 3¢ plus \$140.

** 26,000 x 3¢.

38. The decline in drying (and therefore the decline in the production of light salted dried fish, a product in which Canada had a near monopoly position), was partially for the purpose of increasing fishing time. Primarily however, it was due to the increasing reluctance of the fisherman's wife and family to expand their labour in drying. Family allowances, the salt rebate, and unemployment insurance reduced the financial need to increase family income by drying the fish, a laborious and risky venture.

39. There were in Newfoundland in 1963 some 20,600 inshore fishermen, of which 17,700 were cod fishermen. Over 8,600 cod fishermen still salt their catch. While as a proportion of all cod fishermen they have declined from 61 per cent in 1956 to 49 per cent in 1963, the actual number increased by 1,200 or by 16 per cent during this period.

40. The decline in the proportion of cod fishermen who salt their entire catch has not been accompanied by a larger proportion of those who sell their entire catch fresh or unprocessed. The proportion selling only fresh fish has remained stable at about 15 per cent. The number of fishermen selling both fresh and salted fish has more than doubled since 1956, from 3,000 to 6,300, the latter accounting for 36 per cent of all inshore cod fishermen. The largest absolute as well as relative increase has occurred in the number of fishermen who process part of their catch and sell the remainder fresh.

41. It was previously established that processing by fishermen reduced their yearly landings and probably lowered their individual incomes as well. Then why did 6,300 fishermen elect to continue processing in part when selling fresh to freezing plants was feasible and apparently more rewarding? It would seem that the gross income position of \$780 when selling fresh and \$710 when salting is for these fishermen not a real indication of the economic difference between the two alternatives. Two explanations are possible.

42. First, part of the catch may be salted by fishermen because during the peak trapping season freezing and filleting plants cannot absorb the entire catch. In view of the capacity available for freezing and filleting in Newfoundland this reason for salting can easily be over-estimated.

43. Second, the administration of the unemployment insurance regulations for the inshore fisherman favours the fisherman who salts fish. In other words the total amount of unemployment insurance payments which can be drawn on a given volume of fish which, in whole or in part, is salted by the fisherman exceeds the insurance payments when this volume of fish is sold fresh. Because of unemployment insurance, salting fish realizes an additional return not included in the price of fish but a decisive factor in the decision of the fisherman to salt or not to salt. Unemployment insurance encourages processing by the fisherman, when every economic consideration points to the advisability of removing processing from the fisherman.

SUMMARY

44. The problem of the fishing industry is low productivity, and hence low income per inshore fisherman. This is prevalent in each Atlantic Coast province, but particularly in the inshore fishery in Newfoundland. In Newfoundland, the fisherman catches less fish, receives less for it and relies more on fishing as the sole means of income.

45. The problem of low income and low productivity, particularly the latter, is further aggravated by salting by the fisherman. Processing by the fisherman reduces his fishing time and consequently his annual landings, other factors constant. Salting by the fisherman, resulting in poor quality, inhibits the realization of the potential value of the fish landed. Decentralized

production prevents standardization and control. While processing by fishermen takes place in each province, it is most prevalent in Newfoundland.

46. Since salting by the fisherman is an uneconomic utilization of the fish caught, therefore all measures which encourage salting, such as unemployment insurance, need to be altered at least in such a way as to remove the present discrimination.

47. More desirable, in order to realize the full potential of the fisherman as well as of the fish he catches, processing by the fisherman must be minimized and he should be encouraged to sell unprocessed fish.

48. It must be stressed again that because a significant sustained increase in total inshore landings does not appear likely, average landings per inshore fisherman will not increase unless the total number of inshore fishermen is drastically reduced. Furthermore, even if such a reduction were to occur then income for the inshore fisherman, though conceivably much higher than at present, would remain below that of the offshore fisherman.

CHAPTER VI

THE SALTED FISH PROCESSING INDUSTRY OF THE ATLANTIC PROVINCES AND QUEBEC

Production

1. Production of salted groundfish in the Atlantic Provinces and Quebec consists chiefly of cod. However, other species, principally pollock, hake, haddock and cusk are also salted. The quantities involved are small in the area as a whole but the concentration of production in certain provinces gives these species considerable significance on a regional basis.
2. In Newfoundland practically all the production of salted groundfish consists of cod. Very small amounts of other species, principally pollock, are also salted but in relation to total output the quantities are so small that separate records are not kept.
3. In the Maritime Provinces, salting of groundfish species other than cod is higher than that of cod. This is illustrated in Table I.

TABLE I

PRODUCTION OF SALTED COD AND RELATED SPECIES - MARITIME PROVINCES AND QUEBEC,
1963

(million lbs. - wet salted basis)

	<u>Nova Scotia</u>	<u>New Brunswick</u>	<u>Prince Edward Island</u>	<u>Quebec</u>
Cod	13.3	4.7	1.3	7.1
Scalefish	20.0	2.8	1.6	0.3
<u>Total</u>	<u>33.3</u>	<u>7.5</u>	<u>2.9</u>	<u>7.4</u>

Source: Department of Fisheries.

4. The greatest quantity of salted scalefish, as these species are usually called, is produced in Nova Scotia. Most of it consists of salted pollock but large quantities of hake and small quantities of haddock, cusk and catfish are also salted. In both Nova Scotia and Prince Edward Island more than half the production of salted fish is scalefish. In Prince Edward Island practically all the salted scalefish is hake, while in New Brunswick where just over 1/3 of the production is scalefish, most of this is pollock although a considerable amount of salted hake is also produced. In Quebec, like Newfoundland, only a small quantity of scale fish is salted but, due to the much lower total output of salted fish, scalefish is relatively more significant. The principal species involved is hake.

TABLE II

GROUND FISH LANDINGS PUT TO SALT: ATLANTIC PROVINCES AND QUEBEC; 1963

('000 lbs. gutted head-on)

<u>Province</u>	<u>Produced by Fishermen</u>		<u>Produced by Plants</u>		<u>Total</u>	<u>% of Total Cod and Scalefish Landings</u>
		<u>%</u>		<u>%</u>		
Newfoundland	223,490	98.1	14,613	1.9	238,103	58.9
Nova Scotia	7,444	11.2	59,253	88.8	69,697	38.4
P.E.I.	1,751	26.9	4,756	73.1	6,507	46.6
New Brunswick	723	4.9	14,219	95.1	14,942	28.4
Quebec	11,509	44.8	14,164	55.2	25,673	40.2
<u>Total</u>	<u>244,917</u>	<u>69.6</u>	<u>107,005</u>	<u>30.4</u>	<u>351,922</u>	<u>51.0</u>

Source: D.B.S. Fisheries Statistics of Canada, Department of Fisheries, and Quebec Bureau of Statistics.

6. The production in Newfoundland is just double that in the other four provinces combined. Thus, expressed both in absolute terms and as a portion of the provincial landings being salted, the predominance of Newfoundland stands out clearly.

7. A more detailed breakdown of the provincial totals shown in Table II is given in Table III to illustrate the importance of location factors. In Newfoundland 62 per cent of the salt fish production comes from the most isolated areas in the north, White Bay, Notre Dame Bay, St. Barbe and Labrador. These, together with adjacent areas on the Newfoundland east coast and Quebec north shore are the most marginal sections of the Atlantic coast in every respect. They are the main areas in which salted fish is still produced by necessity; areas into which for economic reasons the penetration of capital in the primary as well as the processing industry has been insignificant. They are areas where the inshore, small boat, fishery predominates, where processing is restricted to cottage industry methods and where fishermen, having no alternative to salting their catch, are extremely vulnerable to price fluctuations.

8. In Nova Scotia 63 per cent of the salt fish production comes from Shelburne, Yarmouth and Digby counties. Unlike Newfoundland, however, most of the fish is heavy salted by plants, which buy fresh fish from inshore fishermen* in competition with the freezing plants. Prices here are among the highest paid in Nova Scotia due to concentration on high quality specialty products such as boneless** salt fish for the American market. In addition,

* Using small boats and long liners.

** 50% of the production in these three counties is boneless.

the large number of firms competing for the supply, the relatively low labour cost of processing in this area, the year-round operation, and proximity to the principal market via the Yarmouth-Maine ferry also contribute to keep up the price of raw material. In Nova Scotia an increase in the market price of salt fish would be reflected in higher prices of fresh fish for salting and not in more salting by fishermen. A decrease in market price would bring lower fresh fish prices but these would not fall below prices at filleting plants. This is a fundamental difference between the two largest salt fish producing regions in Eastern Canada.

TABLE III

SALTED FISH PRODUCTION BY STATISTICAL AREAS: ATLANTIC PROVINCES AND QUEBEC: 1963
(lbs. gutted head-on weight)

D.B.S. Statistical Areas	Description	Equivalent Landed Weight of Salt Fish Production	% of Total
<u>Newfoundland</u>			
A	White Bay	36,485,872	15.3
B	Notre Dame Bay	41,263,356	17.3
C	Bonavista Bay	4,603,038	1.9
D	Trinity Bay	19,815,264	8.3
E	Conception Bay	14,263,888	6.0
F	Southern Shore	14,514,554	6.1
G	St. Mary's Bay	6,242,108	2.6
H	Placentia Bay	22,368,750	9.4
I	Fortune Bay	2,172,896	0.9
J	South West Coast	641,378	0.4
K	St. George's Bay	1,351,338	0.6
L	Port au Port - Bay of Islands	3,076,662	1.3
M	Bonne Bay - Point Riche	1,259,362	0.5
N	St. Barbe	14,266,258	6.0
O	Labrador	55,778,282	23.4
<u>Total</u>		<u>238,103,006</u>	<u>100.0</u>

TABLE III Continued

D.B.S. Statistical Areas	Description	Equivalent Landed Weight of Salt Fish Production	% of Total
<u>Nova Scotia</u>			
2, 3	Inverness	1,206,800	1.8
1, 4	Victoria	513,800	0.8
6, 7	Cape Breton	2,068,600	3.1
8, 9	Richmond	3,149,400	4.7
11, 12	Pictou	588,036	0.9
13	Antigonish	272,200	0.4
14 - 17	Guysborough	3,391,800	5.1
19 - 23	Halifax	5,387,800	8.1
25 - 27	Lunenburg	3,129,800	4.7
28	Queens	3,556,800	5.3
30 - 32	Shelburne	18,929,000	28.4
33 - 34	Yarmouth	4,713,000	7.0
36 - 38	Digby	18,345,600	27.5
39	Annapolis	1,398,000	2.1
40	Kings	45,800	0.1
42	Hants	-	
44 - 46	Cumberland	-	
43	Colchester	-	
	<u>Total</u>	<u>66,697,236</u>	<u>100.0</u>
<u>New Brunswick</u>			
48 - 49	Saint John	11,000	0.1
50 - 53	Charlotte	7,748,400	51.9
63	Restigouche	-	
64 - 68	Gloucester	6,469,760	43.3
70 - 73	Northumberland	380,380	2.5
75 - 77	Kent	332,420	2.2
78 - 80	Westmorland	-	
	<u>Total</u>	<u>14,941,950</u>	<u>100.0</u>

TABLE III Concluded

D.B.S. Statistical Areas	Description	Equivalent Landed Weight of Salt Fish Production	% of Total
<u>Prince Edward Island</u>			
82, 83	Prince	1,867,580	28.7
85, 86	Queens	139,700	2.1
87, 88	Kings	4,499,660	69.2
	<u>Total</u>	<u>6,506,940</u>	<u>100.0</u>
<u>Quebec</u>			
3	Rimouski	-	-
4	Matane	10,560	-
5 - 7	Gaspé-Nord	4,514,160	17.6
8 - 11	Gaspé-Sud	5,999,696	23.4
12 - 15	Bonaventure	1,154,056	4.5
17 - 25	Saguenay	13,853,814	53.9
26 - 28	Iles-de-la Madeleine	140,940	0.6
	<u>Total</u>	<u>25,673,226</u>	<u>100.0</u>

9. Prince Edward Island and New Brunswick share with Quebec and Newfoundland the disadvantages of a short production season. Likewise, most of the landings that are salted are taken by inshore fishermen. In Prince Edward Island 69 per cent is produced in King's County at the southern end of the island, most of it at Souris. Another 29 per cent is produced in the north of the island, mostly at Tignish. In New Brunswick 52 per cent of the salted fish comes from Charlotte County in the extreme northeast. Over half of the production in both provinces consists of high-priced boneless fish for the United States market. However, the total output of salted fish is not large either in relative or absolute terms.

10. In Quebec 54 per cent of the salted fish is produced in Saguenay County on the North Shore of the Gulf of St. Lawrence, and 41 per cent is produced in the two counties of Gaspé North and Gaspé South. The North Shore of the Gulf has the same problems as Newfoundland: fishermen salt their own catch, they are very isolated and the lack of alternate means of processing makes them extremely vulnerable to price fluctuations. The climate is not suitable for producing Gaspé cure, therefore most of the catch is heavy salted. Fish which is not purchased by Newfoundland firms is brought to Rimouski to be mechanically dried. On the Gaspé coast conditions are quite different. Communications are much better, there is a substantial freezing industry to support the price to fishermen and the climate is suitable for making high priced Gaspé cure. Very little fish is salted by fishermen in this area. It is purchased in the fresh state, large fish being salted, small ones being filleted and frozen.

11. The disposition of much of the catch on the Gaspé is supervised by the Quebec United Fishermen. Their somewhat unique system of operation, because of its apparent success, deserves some description here.

12. Well before the season opens the catch of each species is estimated and a very careful study is made of likely market developments. On the results of these surveys the season's catch is allocated between fresh fish, the various forms of frozen fish such as fillets or blocks and salted fish. The fish is all processed in plants under supervision, whether salted, fresh or frozen. Most of the salted fish is Gaspé cure; practically no heavy salted cod is produced in the Gaspé region.

13. Initial prices are paid according to species and size landed. At the end of the season equalization payments are made to each of the locals based on quantities and species delivered to the plants. Finally the surplus is distributed to the members of each local.

Production by Fishermen and by Plants

14. A second important factor illustrated in Table II is the high proportion of the salting operation carried out by fishermen in Newfoundland compared with other provinces. In 1963, 98.1 per cent of salted fish was produced by fishermen in their own stages and only 1.9 per cent was put to salt under supervision by plants.

15. In Nova Scotia during the postwar period salt fish produced by fishermen has fallen to only 11.2 per cent of the total, mostly in the counties of Halifax and Lunenburg. The large number of small coves and natural harbours together with long traditions of salting by fishermen are believed responsible for the concentration of fishermen's production in these areas. The remaining 88.8 per cent is produced by small plants, more than two-thirds of it in the three counties of Shelburne, Yarmouth and Digby. In Quebec 55 per cent of the salted fish was produced by plants and 45 per cent by fishermen, the latter as already mentioned, coming almost entirely from the north shore of the Gulf.

16. The large proportion being put to salt under plant supervision in the provinces other than Newfoundland permits, in theory, a greater degree of quality control. Therefore, since in Newfoundland a much lower proportion than elsewhere is produced by plants, a closer look at the reasons for this would be useful. Table IV illustrates recent trends in that province.

TABLE IV

COD LANDINGS PUT TO SALT: NEWFOUNDLAND; 1957-1963

('000 lbs. gutted head-on weight)

<u>Year</u>	<u>By Fishermen</u>	<u>% of Total</u>	<u>By Plants</u>	<u>% of Total</u>	<u>Total</u>
1957	268,858	92.7	21,184	7.3	290,042
1958	167,752	90.4	17,774	9.6	185,526
1959	248,909	91.8	22,156	8.2	271,065
1960	252,299	89.4	29,861	10.6	282,160
1961	181,556	92.4	14,999	7.6	196,555
1962	215,799	93.7	14,469	6.3	230,268
1963	233,490	98.1	14,613	1.9	238,103

Source: Department of Fisheries, St. John's, Newfoundland, Annual Statistics.

17. The proportion produced by plants in Newfoundland has been declining steadily since 1960. A likely reason for this can be found in the price trends which are illustrated in Table V.

TABLE V
ESTIMATED PERCENTAGE INCREASE IN COD PRICES TO FISHERMEN

<u>Period</u>	<u>NEWFOUNDLAND</u>			
	<u>Light Salted, Dry</u>	<u>Heavy Salted, Wet</u>	<u>Fresh, Split</u>	<u>Head-on, Guttled</u>
1956-1960	20	25	12	15
1960-1963	30	30	20	35

Source: Department of Fisheries, St. John's, Newfoundland, Annual Statistics.

18. It is clear from this table that fishermen would obtain a greater share of the price increase if they salted all of their catch rather than sold a portion of it "fresh split" for salting. In addition, most would receive greater unemployment insurance benefits if they salted their catch, in part or in whole. Therefore, in the absence of a parallel increase in prices for split fish, fewer fishermen sold their catch in this way.

19. From the point of view of the plants it must be asked why they have not increased prices for split fish to a more competitive rate assuming that the quality of their own fish was generally better than that produced by fishermen, and would have obtained a higher price on the market. There are several possible reasons.

20. One is the question of timing. Opening prices for salted fish are usually established in late July or August equal to or slightly lower than those prevailing at the close of the previous season. This is in the middle of the fishing season when the final volume of output can only be estimated. During the ensuing weeks prices went either up or down according to the market.

In the last six or seven years, and particularly the last three years, the price increases in the months of September and October have been unusually large. By that time, however, it is too late for the processors to raise their prices for split fish to competitive levels since the main producing season is over; the larger, thicker fish caught during the latter part of the season, traditionally, have been salted by fishermen themselves, and the price for their production had climbed so high that they would not sell fresh in any case. In the increasingly competitive situation it seems that processors have become less willing to assume the risk of a price decrease later in the year. They, therefore, paid low prices for split fish early in the season, thereby shifting what little risk they did take on to the fishermen.

21. Another reason is that most of the salt fish processors have other lines of business in which they have been engaged for a long time. Chief among these is retailing or merchandizing. The increase in Government transfer payments following Confederation, and later the introduction of unemployment insurance for fishermen has multiplied the amount of cash in circulation and greatly increased the merchandizing sector of the business. At the same time, due to the combination of the fall in the catch and the increase in utilization of cod by freezing plants, the salt fish sector has declined. Some firms are no longer interested in this commodity except when they have to take it from fishermen in payment of their account. Premises formerly used for salting have been allowed to deteriorate or have been utilized for other purposes, one of which is the holding of iced fish for shipment to filleting plants.

22. A third factor is undoubtedly labour. To salt a large quantity of fish a processor must either engage additional labour or divert some of the labour he already has employed in other phases of his business. Either way, the cost of production will inevitably rise. The fisherman gets a very low

return for his labour in making his catch. Therefore, the opportunity costs in most places would render the plant production of salted fish from fresh fish less profitable unless the price for the raw product is kept at a very low level or unless the value of the product is substantially increased.

23. The approximate number of firms processing and handling salted groundfish in the Atlantic Provinces and Quebec is shown in the following table:

TABLE VI
ESTIMATED NUMBER OF PLANTS PROCESSING OR HANDLING SALTED GROUND FISH
ATLANTIC PROVINCES AND QUEBEC, 1963

	Total Number of Plants	Number with Mechanical Dryers
Newfoundland ⁽¹⁾	102	38
Nova Scotia	137	63
New Brunswick	40	} 6
Prince Edward Island	22	
Quebec	19	8
Total	320	115

(1) Does not include 21 Community Stages built by the Government of Canada.

24. Salt fish plants vary widely in size and sophistication. There is the very elaborate multi-dryer installation with large cool rooms, and a deep water wharf, costing in the hundreds of thousands of dollars. There is also the very small one-room building that is little more elaborate than a fisherman's stage. There are few of the former and many of the latter, but most are somewhere in between. The larger plants may carry out the entire operation from salting to drying, packing and exporting, but most of them do no salting. The smaller ones, depending on where they are located, generally carry out

one or perhaps two of these functions. It is often difficult at this end of the scale to determine what constitutes a salt fish plant and there may be some slight errors in the table. However, the data showing plants equipped with mechanical dryers is reasonably accurate.

25. In Newfoundland, out of 102 plants, only 39 salted any fresh fish in 1963. The remainder purchased fish already salted and sometimes partly dried from the fishermen. Some of these firms, acting as middlemen, only stored the fish prior to shipment to an exporter. Exporters and others dried the fish, stored it and packed it for export. Sometimes they added salt or engaged in other processing functions to improve quality or to satisfy customers' requirements.

26. With such a wide range of activities it is impossible to arrive at a meaningful estimate of productive capacity. With very little additional effort many of these plants could handle quite large quantities of split fish for salting. However, few of them would be able to find suitable space for kench curing fish. Therefore, it would be virtually impossible for the industry to assume more than a small portion of the total salting operation now carried out by the fishermen.

27. Dryer capacity is a different matter. It can be estimated with reasonable accuracy and is shown in Table VII. In 1963, total capacity of dryers in Newfoundland was 37.3 million pounds product weight, on the basis of 261 days, assuming heavy salted saltbulk is dried to 38 - 40 per cent moisture content.* Production in that year, the highest in the period 1961-1964 inclusive, was 36.7 million pounds equivalent hard dried weight. Exports

* The Commission used conservative estimates where estimates had to be made. The capacity could be increased by an increase in the number of drying days.

and shipments to the Maritimes in saltbulk state amounted to 23.6 million pounds. This, when converted to dried weight and subtracted from the production leaves 20.9 million pounds of dried heavy salted fish to be produced in Newfoundland dryers. When it is considered that 4.7 million pounds of the heavy salted fish was exported as semi-dry and ordinary cure, and the light salted cure, amounting to 29.4 million pounds, is largely dried by fishermen and only finished off in mechanical dryers, it is obvious that Newfoundland dryers are being utilized at a level well below their capacity.

28. In Nova Scotia the situation is somewhat similar. Dryer capacity, estimated on the same basis as that in Newfoundland, is 38.0 million pounds. However, there are almost twice the number of plants so that their average capacity, just over 600,000 lbs., is less than two-thirds of that in Newfoundland. Production in Nova Scotia in 1963 amounted to 22.4 million pounds equivalent hard dried weight. Imports of saltbulk from Newfoundland were 7.2 million pounds equivalent hard dried weight making a total of 29.6 million pounds to be dried. This is also well under the estimated capacity.

29. Estimated mechanical dryer capacity in New Brunswick and Prince Edward Island is 1.2 million lbs. Production on the other hand was 6.5 million pounds on an equivalent dry basis. However, a small portion of the New Brunswick catch is Gaspé cure which is dried on flakes. Most of the rest is wet salted fish for the boneless trade and a considerable portion of the production in Prince Edward Island is dried outside or shipped to Nova Scotia for drying and export. In New Brunswick, the fresh and frozen trade is taking an increasing proportion of the groundfish catch. This trend is expected to continue. Dried codfish production will likely be abandoned within a few years and green salted will absorb a smaller portion

of the catch each year. Under these circumstances dryer capacity in these two provinces can be considered as adequate for the present needs.

30. Estimated capacity of mechanical dryers in Quebec is 5.4 million pounds. Production of heavy salted fish is 4.4 million pounds equivalent dry weight and that of Gaspé cure is 2.8 million pounds. Some of the heavy salted is dried in Newfoundland and some goes into the manufacture of boneless. Much of the Gaspé cure is dried on flakes in the sun. There is, therefore, some excess drying capacity in Quebec.

Marketing

31. The marketing of salted fish from Newfoundland and Canada has had a difficult history. Problems created, between the two world wars in the importing countries, by political developments, rapidly shifting exchange rates and finally the great economic crisis affected Newfoundland more severely than Nova Scotia. Since Newfoundland's problems were caused initially by marketing difficulties, attempts to improve the situation were directed almost entirely toward the regulation and control of marketing, and all were imposed by Government. Little effort was directed toward development of other products; instead there gradually evolved a system of export quality regulation and controlled exporting through a unified agency.

TABLE VII

ESTIMATED ANNUAL CAPACITY OF MECHANICAL SALT FISH DRYERS

ATLANTIC PROVINCES AND QUEBEC: 1963

D.P.S. Statistical Area	Description	Estimated Capacity (lbs. Heavy Salted 38-40% MC From Saltbulk 261 Days)
<u>Newfoundland</u>		
A	White Bay	600,000
B	Notre Dame Bay	3,700,000
C	Bonavista Bay	2,800,000
D	Trinity Bay	13,600,000
E	Conception Bay	6,000,000
F	Southern Shore	5,500,000
G	St. Mary's Bay	800,000
H	Placentia Bay	3,100,000
I	Fortune Bay	600,000
L	Port au Port - Bay of Islands	600,000
	<u>Total (38 plants)</u>	<u>37,300,000</u>
<u>Nova Scotia</u>		
1, 4	Victoria	200,000
2, 3	Inverness	400,000
6, 7	Cape Breton	250,000
8, 9	Richmond	900,000
14 - 17	Guysborough	200,000
19 - 23	Halifax	7,100,000
25 - 27	Lunenburg	10,000,000
28	Queens	500,000
30 - 32	Shelburne	6,300,000
33 - 34	Yarmouth	5,400,000
36 - 38	Digby	6,800,000
	<u>Total (61 plants)</u>	<u>38,050,000</u>
<u>New Brunswick</u>		
48 - 49	Saint John	100,000
50 - 53	Charlotte	500,000
64 - 68	Gloucester	200,000
	<u>Total (3 plants)</u>	<u>800,000</u>
<u>Prince Edward Island</u>		
82 - 83	Prince	200,000
87 - 88	Queens	200,000
	<u>Total (2 plants)</u>	<u>400,000</u>
<u>Quebec</u>		
3	Rimouski	4,000,000
5 - 7	Gaspé-Nord	600,000
8 - 11	Gaspé-Sud	400,000
26 - 28	Iles-de-la-Madelaine	400,000
	<u>Total (8 plants)</u>	<u>5,400,000</u>

32. Unlike Newfoundland, no attempt was made in Nova Scotia to form a central organization for marketing salted fish. The Government paid subsidies of \$1 per quintal on exports of salted cod and 63¢ on other salted groundfish in 1937 and 1938. In 1939 the Salt Fish Board was established by the Canadian Government to grant assistance by means of deficiency payments to producers at the end of the fishing season. The actual marketing, however, remained in the hands of independent exporters, selling their own separate brands of fish and competing with each other as well as with centralized agencies of other producing countries. In the buyers market that prevailed in the 1930's they lost much of the Caribbean market to Newfoundland.

33. Apart from the small firms salting fish for the boneless market there is a dwindling group of quite large firms centered at Lunenburg and Halifax whose main function is to dry and export salted fish. Most of them have been in the salt fish business for many years and at one time had a substantial investment in banking vessels, as well as shore facilities. The decline in the banking vessels has left them with a large investment in wharves, warehouses, dryers and other machinery but no raw material. While they buy from local inshore fishermen, the supply is inadequate and they have had to turn increasingly to Newfoundland for their fish. Meanwhile, the production of salted fish in Newfoundland has been declining and prices have been going up, thus making it more difficult for Nova Scotia firms to compete. Their purchases in Newfoundland have fallen off considerably since 1960. Other things being equal, the present trend in Newfoundland is likely to continue for some time and the industry in Nova Scotia must expect even greater competition. However, the advantages they enjoy over Newfoundland processors with respect to shipping facilities, although (Newfoundland subsidizes shipping services to the Caribbean) lower interest charges and

lower fixed production costs will enable them to continue to compete effectively for the Newfoundland product. However, if the supply were to fall very much further or if Newfoundland succeeded in diverting a larger proportion of her exports into the European markets, the situation would change.

34. There is no difficulty in marketing the unique Gaspé cure produced in Quebec. Most of it is handled by the Quebec United Fishermen and is marketed in the United States and Italy. Small amounts of poorer quality fish go to Puerto Rico or Jamaica. One problem that is becoming more severe is the decrease in size of the fish taken. This has resulted from increased pressure on the resources. Since the salt fish markets prefer large fish, the cooperative, where possible, transports small fish to their freezing plants for block production and larger fish to their salting plants. Likewise, there is no difficulty in marketing the Quebec production of boneless fish in the United States. The heavy salted fish from the North Shore of the Gulf presents greater marketing problems since the volume involved is relatively small and shipping distances are great. Unlike the unique Gaspé cure it must compete with large quantities of similar fish from Newfoundland and Nova Scotia as well as other countries. Most of it is marketed in Jamaica, Trinidad, Puerto Rico and the United States. In 1963, the only markets were Trinidad and the United States, while in 1964 even these were reluctant to buy.

35. Traditionally, Newfoundland's markets for salted fish were in Europe and Canada's were in the Caribbean. The trend leading up to the present situation started in the 1930's, when continued difficulties in the European markets caused Newfoundland to turn increasingly toward the West Indian markets where her low priced fish gradually displaced Canadian fish. Newfoundland's relative share in the combined Canadian and Newfoundland exports to Puerto Rico,

for instance, climbed from 40 per cent in 1930 to 80 per cent in 1940. Trends in other Caribbean markets such as Cuba and Jamaica were similar. Between 1922 and 1940 exports from Newfoundland declined by 25 per cent while those from Canada fell by 60 per cent. Newfoundland, where production fell off proportionately less, had no alternate occupations and its fishery being less adaptable to other species and products, had to continue fishing, even when returns became very low.

36. The Newfoundland Commission Government after 1931 tried to alleviate the situation. In 1933 the Salt Codfish Act ended talqual buying and set up grading standards. As a result quality improved but exchange and other problems in the importing countries limited its effect in raising Newfoundland's exports. In 1936, the Fisheries Board replaced the Salt Codfish Board as a price negotiating body and compulsory inspection was progressively instituted during subsequent years. Biological research was started, subsidies were granted for schooner construction and a salt rebate was paid.

37. The difficulties continued however. Norway began subsidizing exports to Portugal in 1936. This was later increased and extended to include shipments to Brazil and Cuba. Portugal, organizing her buyers into a guild or gremio in 1934, gradually increased her domestic catch. Competition with Iceland and a quota arrangement with Norway, as well as political and economic instability, reduced Spanish imports from Newfoundland. Complete disruption of those markets, as far as Newfoundland was concerned, occurred as a result of the Spanish Civil War, 1936-1939, and sanctions against Italy. The Coffee Crisis of 1930 and subsequent economic difficulties reduced Brazilian imports, also affecting Newfoundland.

38. Following the establishment of the Newfoundland Fisheries Board in 1936, group marketing, along the lines started in 1911, was developed once

again. The Board granted exclusive marketing rights to groups of exporters marketing fish in Portugal, Spain, Puerto Rico, Brazil and the British West Indies. The system was expanded to cover all markets during the period of the Combined Foods Board allocations after 1943. Under it there was an Eastern Hemisphere group and a Western Hemisphere group. This system, unlike previous attempts, met with considerable success in combating some of the factors that caused the conditions of a buyers market which prevailed in the 1930's. It succeeded in reducing market gluts and marketing costs, stabilized quality and eliminated competition between exporters in the foreign markets.

39. In 1947, this system was merged into a single marketing group, the Newfoundland Associated Fish Exporters Limited, composed of members licensed by the Fisheries Board which issued export permits only to members of the group. Each member paid an entrance fee of \$10,000 and all returns were pooled, giving each exporter the same price for grades less sales costs.

40. NAFEL had initially an exclusive right to export salted fish from Newfoundland, subject to control by the Fisheries Board. This right was continued after Confederation but in 1954 wet salted fish entering inter-provincial trade, while still requiring a shipment permit from the Board, was removed from NAFEL's control. Finally, in 1959 NAFEL's legal monopoly in export trade was also terminated, although its members agreed to continue as a voluntary export association. This arrangement still prevails today.

41. Following the freeing of inter-provincial trade in saltbulk fish, shipments to the Canadian mainland jumped from 110,000 cwts. in 1953 to 233,000 cwts. in 1954, 2/3 of Newfoundland production of heavy salted fish. Prior to 1953, annual shipments to Canada had never been higher than 76,000 cwts. From 1954 to 1960, with the exception of the catch failure season of 1958, annual shipments were all over 230,000 cwts.

42. The demand for saltbulk in Nova Scotia arose from the expansion of the frozen fish industry which, by drawing labour out of the salt fish industry, raised the cost of operating the banking schooners and decreased the supply of cod available for salting. A number of bankers managed to stay in operation for a few years by recruiting crews in Newfoundland. Some of the inshore fishermen (who suffered economically during the depression almost as much as in Newfoundland) had been drawn into the medium-sized long liner and dragger fleet which was built up during and after the War with Government assistance. These vessels fished almost entirely in conjunction with the fresh and frozen industry and the supply of cod from this source was also reduced. Consequently the Nova Scotia salt fish plants became almost entirely dependant on Newfoundland inshore fishermen for their supply of raw material.

43. The effect this has had on the Newfoundland fishing industry is difficult to assess in isolation from other forces which were influencing the economy in the post-war period. Two results stand out clearly. The first is shown in Table VIII.

44. The demand from Nova Scotia was a major factor in the shift toward the production of heavy salted fish. Another was the increase in the family cost of making light salted fish, or in other words, the disappearance of female and school age members of the family enterprise from the traditional work on the flakes due to what might be called social emancipation.

45. Prices for both light and heavy salted fish started to decline from the wartime peaks in the 1949-50 season and continued to recede up to and including 1955. The little statistical evidence available for this period indicates that the price of heavy-salted fell relatively more than

TABLE VIII

ESTIMATED PERCENTAGE DISPOSITION OF COD LANDINGS 1953 - 1964, NEWFOUNDLAND AND QUEBEC

NEWFOUNDLAND

	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
Salted, Light	64.4	59.9	45.7	42.1	41.0	31.1	24.2	24.1	25.5	24.5	29.3	27.8
Salted, Heavy	<u>19.8</u>	<u>18.5</u>	<u>25.0</u>	<u>30.8</u>	<u>31.2</u>	<u>30.8</u>	<u>41.2</u>	<u>45.4</u>	<u>34.8</u>	<u>37.6</u>	<u>30.0</u>	<u>26.6</u>
Total Salted	84.2	78.4	70.7	72.9	72.2	61.9	65.4	69.5	60.3	62.1	59.3	54.4
Total Frozen	14.3	20.4	27.3	25.5	25.2	34.6	31.4	28.0	36.1	33.7	36.5	41.6

QUEBEC

Salted	71.7	48.4	65.5	53.1	43.8	43.5	44.3	31.0	24.7	29.3	34.5	21.1
Frozen	4.7	14.0	20.6	24.9	34.3	37.4	44.2	52.4	56.6	57.6	58.7	59.5

Source: Newfoundland: Canada Department of Fisheries, Annual Statistics, St. John's.

Quebec : Fisheries Statistics of Canada, and Quebec Bureau of Statistics.

that of light-salted. However, since 1950 they have been climbing, prices for heavy-salted relatively more than those for the light-salted cure. There can be no doubt that the demand from Nova Scotia was an important factor in this trend. Other factors have of course been the increasing competition for the raw material from the frozen fish industry and the declining trend in inshore cod landings.

46. In spite of the decline in cod landings the portion processed by the frozen fish industry has steadily increased, particularly in years of poor fishing such as 1958. This indicates that salt fish except that made into special cures is becoming more and more a residual product which is produced mainly where or when there is no other alternative. Against this background the demand from Nova Scotia, from Newfoundland exporters and more recently from unusual directions such as Norway, has pushed the price of salted fish up to a point where processors' margins have been severely cut and in some cases eliminated. The greatest benefit has accrued to the fishermen and it is equally obvious that they would not have benefited to the same extent had salted fish not been opened to free interprovincial trade.

47. The fishermen are therefore now receiving as high a proportion of the export price as is possible under present levels of efficiency in the industry. This rise in fish prices as well as other factors such as the decline in the woods labour force, the extension of unemployment insurance to fishermen and the drop in employment on United States bases in Newfoundland have been the principal causes of the increase in the number of fishermen since 1950. Meanwhile, with the decrease in the inshore catch, landings per fisherman have fallen and, while the higher prices have to some extent

compensated for this net returns per fisherman have fallen.

48. Similarly, in the case of salt fish dealers, increased prices have reduced profit margins. Competition from the frozen fish industry, together with increased pressure on the resource, have reduced the supply. As a result the number of small firms, considering the present volume and type of fishermen's production in Newfoundland, is much too large to permit the greatest possible advantage to be taken of economies of scale.

49. The problem therefore under the prevailing condition of a sellers market lies in the production rather than in the marketing of salt fish.

CHAPTER VII

FROZEN FISH OR SALTED FISH:

SOME ECONOMIC CONSIDERATIONS

1. Freezing and salting are the two methods of utilizing Canadian fish resources that are most common in the Atlantic Coast fish processing industry. A significant consideration in any program of development for the East Coast fishery is which method benefits the Canadian economy more. Not only is it consequential to determine the overall advantage, but as well, the sector of the industry to which the increased return accrues. A detailed examination of these questions is precluded by the paucity of data on production costs at both the primary and secondary levels. The Commission feels, however, that a number of aspects can be considered at this time, which give the direction of priority.

Overall Economic Return

2. An analysis of production in each of the Atlantic Provinces indicates that, on average, cod which was filleted and frozen has returned more to the Canadian economy than cod which was salted. In 1962, in Newfoundland a pound of cod which was filleted and frozen returned an average of 7.3 cents. When salted and/or dried this pound of fish returned 5.7 cents. Corresponding figures in Quebec were 6.2 cents and 4.7 cents, and in Nova Scotia 7.7 cents and 6.5 cents. In other words, on average, the foreign consumer has been willing to pay more for a pound of cod in the frozen than in the salted state. Also the above suggests that the fisherman, the plant labourer, the material supplier and the investor, in total, receive more from a pound of cod which is filleted and frozen than from a pound of

cod which is salted.

3. Salt fish production in New Brunswick and Prince Edward Island utilizes only small quantities of cod and a major portion is used to make "boneless". In these two provinces a pound of cod salted realizes nearly as much or more than when frozen, indicative that salting for "boneless" production compares favourably with freezing.

4. While on average cod which is salted returns less than when filleted and frozen, this is not necessarily true for all salt fish products. Frozen fillets of cod are a much more homogeneous commodity than salted or dried cod. Cod may be light salted or heavy salted, fully dried or partially dried or wet. Among other things, as the processing costs vary so the return per unit of raw fish input will vary. Export prices give an indication of the differences in return for several classes of salted fish commodities.

TABLE I
EXPORT PRICES OF FROZEN AND SALTED COD PRODUCTS
(Cents per Pound of Fish Input - gutted head-on)
1963

<u>Fresh or Frozen</u>	<u>Salted</u>
Fresh, whole or Dressed: Canada 7.1 cents	Boneless Canada 10.1 cents
Frozen Fillets : Canada 6.9 cents	Light Salted, over 43% M.C. Canada 6.2 cents
Frozen blocks : Canada 6.9 cents	Nfld. 5.6 cents
	Light Salted, 43% M.C. or less Canada 5.3 cents
	Nfld. 5.7 cents
	Heavy Salted, 43% M.C. or less Canada 5.4 cents
	Nfld. 5.4 cents
	Heavy Salted, 43% - 45% M.C. Canada 5.2 cents
	Nfld. 5.0 cents
	Heavy Salted, 46% - 50% M.C. Canada 4.3 cents
	Nfld. 3.4 cents
	Saltbulk, over 50% M.C. Canada 4.3 cents
	Nfld. 3.5 cents

Source: Dominion Bureau of Statistics.

5. As indicated by the export prices, only boneless salted cod commands clearly a greater return than cod which is filleted and frozen. Light salted cod was next best, but did not have export earnings comparable to frozen cod. Generally speaking, Canada did not realize as much for its cod which was salted as for the cod which was filleted and frozen.

6. The export classification of salted fish gives, however, an average of several grades and qualities. It does not convey the return on high grades and high qualities. In order to obtain a further insight into which salted fish products compare favourably with filleted and frozen cod, an analysis was made of average realizations for salted fish products by Newfoundland Associated Fish Exporters Limited.

TABLE II
AVERAGE REALIZATION FOR SELECTED GRADES OF SALT FISH
BY THE NEWFOUNDLAND ASSOCIATED FISH EXPORTERS LIMITED: 1963
(Cents per Pound of Cod put to Salt)

<u>Heavy Salted</u>		<u>Light Salted</u>	
<u>Hard Dried:</u>		<u>Hard Dried:</u>	
<u>Choice</u>		<u>Genuine Spanish</u>	
XL.	7.23 cents	L.	7.36 cents
L.	6.84 cents	M.	6.90 cents
M.	6.54 cents	S.	5.89 cents
S.	6.20 cents	<u>Regular Spanish</u>	
XS.	5.56 cents	L.	6.48 cents
<u>Standard</u>		M.	6.04 cents
XL.	7.13 cents	S.	4.98 cents
L.	6.53 cents	<u>Italian Choice</u>	
M.	6.26 cents	LM.	7.30 cents
S.	5.81 cents	S.	6.58 cents
XS.	5.20 cents	<u>Italian Prime</u>	
<u>38/40% Moisture Content</u>		LM.	6.88 cents
<u>Choice</u>		S.	6.18 cents
L.	6.89 cents	<u>Italian Small Madeira</u>	
M.	6.20 cents	5.56 cents	
S.	5.73 cents	<u>Portugese Prime</u>	
XS.	5.74 cents	XL.	6.59 cents
<u>Standard</u>		LM.	6.09 cents
L.	6.56 cents	<u>Madeira (General)</u>	
M.	5.88 cents	XL.	5.91 cents
		S.	5.52 cents

Source: Commission Correspondence.

7. Two important factors are disclosed by the average returns to NAFEL for selected grades of salted cod in 1963. The first is that a cod medium-sized or smaller, regardless the cure, returns more filleted and frozen. The second is, that salting large cod returns an amount similar when filleted and frozen only if it grades choice when heavy-salted, and "Genuine Spanish", "Italian Choice" or "Italian Prime" when light salted.

8. The size of cod caught in inshore waters has become progressively smaller due to the increasing intensity of fishing effort not only in inshore waters but especially in offshore waters. This trend is at present not expected to reverse itself, and suggests that because of this factor salting is becoming a less desirable form of utilization. As well it suggests that fish processing should not consist of two separate industries, a filleting and freezing industry and a salting industry, but rather one industry in which large cod are salted and medium and small cod are filleted and frozen.

9. There are no precise data available showing how much of each grade of salt fish was exported from Newfoundland in 1963. It is safe to say, however, that only about 10-15 per cent of salt fish production qualified for the "extra large" and "large" high quality grades outlined above. And it would seem unlikely that more than 30 per cent of all cod landed was above "medium-sized". As a result, while there is certainly an opportunity for an extensive improvement in the quality of salt cod production in general, the scope for upgrading to products which would return as much as or more to the Canadian economy than filleted and frozen cod is limited.

10. It must be pointed out that the preceding comparison between freezing and filleting cod and salting cod applies to areas where a

fisherman has the opportunity to supply a freezing and filleting plant or to salt his fish. In areas where there are no filleting and freezing plants, where at present the major portion of salted fish output originates, the comparison favours freezing less. Factors such as distance, seasonality of fishing and coastal icing conditions increase filleting and freezing costs to an extent not acceptable to the foreign consumer, while these increased costs are already reflected in the price structure of salt fish production.

The Fisherman's Return: Freezing vs. Salting

11. Newfoundland salt fish production is almost entirely a fisherman's product. The inshore fisherman sells salted fish, heavy salted or light salted of various drieths or wet. As a result the comparison between the fisherman's return from frozen fish and from salted fish is immediately beset by two complicating factors. First, what salt product should be used for the comparison? Second, what part of the price of salt fish to the fisherman is for the fish and what part is the return for labour and working capital expended in salting and drying? We have used light salted fish in the comparison with frozen cod fillets, and have used an A.R.D.A.* study to give an approximation of how much the fisherman receives for processing.
12. The inshore fisherman in 1963 received for light salted dried fish, Madeira, from \$16.25 to \$18.25 per quintal of 112 pounds. This is equivalent to 3.6 to 4.1 cents per pound of cod put to salt. The cost study of a salting and drying plant suggests that the fisherman probably incurs costs of little more than 1.0 cents, of which labour constitutes 0.6 cents, at plant rates. This suggests that the fisherman received per pound of cod put to salt between 2.6 and 3.1 cents for his fish, which is roughly equivalent to what he would have received if his fish had been utilized for freezing.
13. This similarity in return to the fisherman between the two uses should not be surprising because cod is the raw material common to both methods of utilization. If there is unrestrained competition between them for the available cod then the amounts salted and frozen are in equilibrium when raw fish prices to the fisherman are equal.

* Pike, A.P., *Employment and Earning Opportunities; A Preliminary Report*
A.R.D.A., January, 1964.

TABLE III
MARKET VALUE OF COD: FROZEN⁽¹⁾ AND SALTED:⁽²⁾ 1958 - 1963
BY PROVINCE

(Cents per Pound of Fish "guttet head-on")

Year	Newfoundland		Nova Scotia		Quebec		New Brunswick		Prince	Edward	Island
	Frozen	Salted	Frozen	Salted	Frozen	Salted	Frozen	Salted ⁽³⁾	Frozen		Salted ⁽³⁾
1963	7.5	6.0	n.a.	n.a.	n.e.	n.a.	n.a.	n.a.	n.e.		n.e.
1962	7.1	5.7	7.7	6.5	6.2	4.7	6.7	6.4	6.8		7.1
1961	6.7	5.0	7.0	5.4	6.5	5.1	6.7	6.1	6.8		6.9
1960	6.3	4.6	6.8	5.3	5.7	4.8	6.6	6.2	5.2		5.5
1959	6.5	4.0	6.9	3.8	6.2	4.1	6.6	7.2	7.4		7.9
1958	6.4	3.2	7.1	4.9	5.8	4.5	6.9	6.8	7.1		5.6

(1) Includes fresh and frozen fillets, frozen blocks and sticks.

(2) Includes dried or wet salted cod.

(3) Averages for salted cod are high in relation to frozen cod, because of the high proportion of "boneless" included here.

Source: Based on Fisheries Statistics of Canada; Dominion Bureau of Statistics.

14. Dispressing momentarily, in areas lacking filleting and freezing facilities there is no competition among alternative uses. Consequently the return to the fisherman for his fish does not rest on the price of fish at the filleting plant, but depends largely on competition between various buyers of salt fish. Poor quality can be discounted disproportionately under these circumstances, particularly in a buyers market.

15. Competition between the two uses for the fisherman's fish is hindered as well by unemployment insurance regulations. The fisherman receives an amount for salting fish, which he would not receive if they were filleted and frozen, and which is not reflected in the price of salted fish. This is the additional unemployment insurance benefits received when his catch is salted, in whole or in part.* For an average inshore fisherman who light-salted 50,000 pounds of cod, the additional benefits would amount to .4 cents per pound. This amounts to between 10 and 12 per cent of the return from the sale of the product itself. Unemployment insurance therefore increases the return to the fisherman for his fish when he salts it with two effects; namely first, the amount of fish which is salted is higher than it would be in areas where filleting and freezing facilities are available, and second, it offsets the discount to the fisherman for poor quality salt fish.

Processing Costs: Freezing vs. Salting

16. In the preceding section it was estimated that for each pound of cod which the fisherman salted (light) and dried, he received 1.0 cents for costs. At plant rates, the return on his labour would be approximately 0.6 cents, and the remainder for salt, less rebate, and overhead expenses.

17. The exporter who purchases fish from the fisherman, incurs a number of costs such as grading, packing, collecting, unloading, and additional drying

* See Chapter VIII for a fuller discussion of this.

costs. Besides these production costs there are depreciation and other overhead expenses, as well as the return on capital invested. The specified cost factors involved for each particular grade of salted fish are not available inasmuch as each exporter handles a multiplicity of grades and kinds. A study of three salt fish establishments indicates that, for all grades handled, the direct production costs are about 1.08 per pound of cod put to salt and indirect costs, including profits, an average of .77 cents. Plant labour absorbs .08 cents, containers .33 cents, fuel and electricity .07 cents. Correspondence with the Commission indicates that .50 cents is for depreciation and other overhead expenses, suggesting that .27 cents is the return on investment. If a similar cost structure pertains to light salted dried fish alone, then the total value added to the value of the raw fish is 1.0 cents by the inshore fisherman and 1.85 by the exporter, for a total of 2.85 cents. The overall labour component is approximately 1.28 cents, salt (minus rebate) .05 cents, packaging .33 cents, and fuel, and electricity .07 cents. Profits to the exporter would be about one quarter of a cent per pound of cod salted.

18. This approximate cost structure would change considerably if the entire salting and drying operation were to take place in a plant. The fisherman with primitive equipment uses his labour, plus salt and sunshine. The operation is very labour intensive at the fisherman's level. The salting operation would be similar in a plant, but drying would be accomplished in mechanical dryers. This would involve costs for depreciation, interest, fuel and electricity which the fisherman did not incur. While the labour costs per unit of input might be reduced, it is not certain whether this would offset the increased costs of mechanization. An important consideration is that the processing costs, outlined above, are probably not much different

for small fish than for large fish. Since, however, large salted fish have a considerably greater return, therefore salting large fish offers a much better opportunity for offsetting the increased costs of mechanization and moreover provides a return to the Canadian economy similar to the frozen product.

19. A study of a number of filleting and freezing plants in Newfoundland points out that the return to plant labour per pound of cod filleted and frozen is 1.56 cents, well above the labour input when salted. The value of containers and other material purchased from Canadian suppliers, .93 cents per pound of raw fish, was also greater than when salted. Filleting and freezing also require more fuel and electricity, .15 cents per pound of raw fish, than producing "Madeira" light salted fish. The return for overhead expenditures and profit to these filleting plants averaged a total of 1.21 cents per pound, also greater than the income generated by salting. In fact, the total value added by processing to the landed value of a pound of cod totalled 3.95 cents for filleting, compared with 2.85 cents for salting and drying.

Summary

20. For every pound of cod taken from the ocean by the Canadian fisherman and processed by Canadian workers, using Canadian containers and materials, the foreign consumer will pay more when filleted and frozen, than salted and dried. Only boneless salted cod, and choice grades of large salted fish can match the return to the Canadian economy, in terms of raw fish input, of the filleted and frozen product.

21. The above analysis suggests that large cod be salted and dried to choice qualities, and that medium-sized and small cod be filleted and frozen.

Such a utilization of the cod landed would benefit the fisherman, would increase plant employment and offer the best opportunity for raising its productivity, and would maximize Canadian export earnings from fish products.

CHAPTER VIII

FACTORS WHICH INHIBIT ECONOMIC DEVELOPMENT IN THE FISHERIES

1. Before making any recommendations on the question of how to promote economic development in the fisheries a brief examination of the principal factors which must be overcome will be made. These factors can be divided into two broad categories, geographic and artificial. The former includes climate, fishery resource characteristics, abundance of other natural resources, shape of the coastline and other similar factors which have affected the course of the fishery throughout its history. The second category includes measures which, though intended as assistance to compensate for low incomes, in fact tend to preserve the status quo and in the long run work against other assistance schemes designed to promote economic development.

Geographic Factors

2. The relationship of the resource and the coastline has caused the population to be scattered in a large number of very small settlements. The period of massive settlement probably occurred in Newfoundland at the end of the 19th Century and a glance at the charts of those days illustrates just how extensive it was. The first consolidation took place after the gasoline engine came into general use and it has been continuing slowly ever since. For a number of years the Provincial Government has wisely promoted the movement of people out of isolated settlements and into more central areas by paying grants of \$500 per family provided the entire settlement was evacuated. The stepped up federal-provincial program just announced is a further step towards reducing the problems created by isolation.

3. Nevertheless, of the factors that retard economic development in fishing areas isolation is still the most important. The cost of any program to improve education, build up other industries, supply electric power, improve communications to marketing and supply points and raise living standards, is multiplied many times by the degree of isolation of the people. In Newfoundland, the problem is further magnified by sectarian rivalry which necessitates, at high cost, the maintenance of a multiplicity of one or two room schools in many of these tiny settlements. The same spirit contributes to the lack of co-operation among fishermen in managing community affairs, and in furthering their collective interests.

4. The salt fish industry today is tied largely to isolation. It is confined to those areas where fishermen, because of distance, have no mobility. There is no other outlet for their fish and, equally important, they have no alternate employment for their labour, either as a means of supplementing fishing income or of leaving fishing altogether. These conditions are found on the Newfoundland coast north of Cape Bonavista and Cape St. George, on Labrador, and on the North Shore of the Gulf. They are also found in isolated parts of Placentia and Trinity Bay in Newfoundland and a few places in Nova Scotia and New Brunswick. By far the largest in size and number of people affected is the Newfoundland - Labrador area.

5. Isolation, by tying the inshore fishermen to salted cod production, makes an improvement in their productivity very difficult. They cannot land fish at a plant because the total volume available within a certain distance is not sufficient to support a plant. They must, therefore, process their own catch, cutting down the time they have for fishing. They must also have shore installations reducing the capital available for investment in better boats. They can only land those species which can be preserved by salting

which in Newfoundland means cod, herring, mackerel, turbot and salmon, or species which by virtue of their high value can be marketed fresh such as salmon and lobster. No other species such as flounders, or by-products such as tongues, can be utilized.

6. In Norway the combination of geographical factors which enabled people to fish in winter and farm in summer also retarded centralization. However, it gave stability to the economy, enabled greater capital accumulation and promoted a higher degree of labour mobility, so that the transformation to greater specialization within these industries was accomplished without too much difficulty.

7. In Newfoundland experience has shown that when fishermen move to larger centres they will if possible return to their former fishing grounds during the summer. This is particularly true of the older people; the younger ones prefer to stay close to the 'bright lights' and try to get work on shore. Eventually many of the older people do the same but the adjustment is infinitely more difficult for them and they may continue to fish even for psychological reasons. If it is economically possible to carry on a fishery from the new location, some of the new residents should be encouraged to continue their vocation and be given better catching equipment as well as a plant on shore that will take all their catch.

8. The Newfoundland climate is another important factor inhibiting economic growth. The fishing season, except on the south coast, is limited by climate to between May and November, a period of seven months, and in the more northerly regions such as Labrador it is even shorter. For the fisherman this means trying to make enough money in a six-month period or less to last him for the whole year. To do this his productivity in season must be high, and

his overhead costs must be minimized. In fact his productivity is low and his real returns are declining.

9. For the plant it means accumulation of fixed charges over a long period when there is no production to pay for them. The fixed cost element in the finished product rises as the production season becomes shorter. Ice, by preventing market shipments may further increase these costs.

10. The northward penetration of capital in both catching and processing is therefore limited by the length of the season. This applies to both frozen and salted fish production, although the latter with its drying operation is more favourably situated in this respect, provided shipping facilities are available. The fact remains that with the concentration of heavy landings into a period of a few weeks the frozen fish industry cannot, because of seasonal factors, take care of the whole catch without greatly increasing unit costs.

11. In a restricted seasonal operation such as the fishery in these remote areas economic development cannot proceed beyond a certain point, unless some other seasonal industry complementary to it can be developed or unless the rest of the economy is willing to assume the burden. In Newfoundland from about 1910, and to some extent in Quebec, the other seasonal industry was winter logging. However, the adoption of the chain saw and year-round logging operations has reduced the wood labour force and left the fishery 'without a mate'. In the absence of any other industries it is inevitable that people living in these marginal areas and earning their entire living from fishing remain underemployed and that their incomes are likely to be lower than in areas where fishing is a year-round occupation. That people have been able to live in these areas up to now is due to the

hitherto great abundance of the resource. It is also due to their relatively modest needs, and their ability to live off their own resources. They supplement their income and diet with activities such as sailing and hunting for moose, caribou, sea birds and other wildlife; they cut their own fuel and receive assistance from Government transfer and relief payments.

12. The state of the resource base, insofar as it is presently known, has been described in detail in several papers. The general conclusions for the inshore fisheries in Newfoundland and the Gulf are not favourable. The phenomenal growth in the total fishing effort by all nations on the banks around Newfoundland has caused a slow decrease in the inshore cod landings of most areas over the past ten years. During the same period there has been a steady increase in numbers of fishermen. On the basis of these reports and the statistics available, the Commission has concluded that as long as the total fishing effort is maintained at its present level (and it is more likely to increase) there can be no sustained increase in the inshore catch. There may be larger than average catches for brief periods if catching power is greatly increased or if climatic conditions are unusually favourable, but they will not be of a magnitude that will result in market difficulties, nor will they be sustained. Problems in marketing may indeed occur but they will be due to internal problems such as poor quality fish for which the industry has paid the fishermen too high a price. The Commission places great emphasis on these points and most of its recommendations are made on this assumption of a limited resource.

Artificial Factors

13. The 'artificial' factors include all Government cash payments which fishermen receive as Canadian citizens such as family allowances and old age

pensions as well as unemployment insurance, salt assistance, and public works expenditures which they received as Canadian fishermen. All of these, to the extent that they add to the fishermen's cash income, make it easier for them to continue to live in these marginal areas, and tend to retard natural economic development. Other measures such as loans and assistance for construction of larger vessels and fish plants, educational programs for fishermen, harbour developments and community stages, if properly directed, have a positive effect in reaching optimum economic development, and are therefore not included in this study.

14. Unemployment insurance and salt assistance because of their particular effects on salted fish production, will be treated at somewhat greater length. The Unemployment Insurance Act was amended to include fishermen in 1957. The actual purpose of the amendment was to provide a means of increasing their income; it is certainly not an insurance scheme when applied to fishermen. Furthermore, benefits paid exceed fishing stamp contributions by close to ten to one.

15. The fishermen's scheme is similar to that applying to other insured workers. Since benefits are paid only during the seasonal period (December 1 - May 15) special fishing stamps are used to distinguish these contributions. If a fisherman is employed for a wage the employer affixes stamps in his book in the same way as in other occupations. However, most fishermen work for a share of the catch and the first buyer of the fish is the 'employer' for insurance purposes. His earnings are the gross value of the catch less 25% representing operating costs. Where for instance a 4-man crew is involved the gross value of the catch, less 25% is divided by 4 to obtain the fishermen's earnings whether or not the catch was shared in this way.

16. Fishermen's contributions are payable on a weekly basis and credited to the week in which the delivery is made except in a few cases such as offshore fishing when a trip extends over more than one week. Fishermen are insurable regardless of their annual earnings, but there is a minimum value of deliveries, \$9.00 net, below which they are not insurable. At the other end of the scale weekly earnings of \$69.00 and over receive the same maximum denomination of stamps. Sixty-nine dollars is equivalent to 4,600 lbs. of fish at 2¢, 3,680 lbs. at 2.5¢ or 3,066 lbs. at 3¢. Thus, if a fisherman sells 15,000 lbs. of fresh fish in one week he gets credit for only a small portion of it, and the higher the value the smaller the portion he will get credit for in volume terms. In Newfoundland with the great degree of seasonality in the fishery this has an important bearing.

TABLE I

EARNINGS AND CONTRIBUTION RATES

<u>Range of Earnings</u>	<u>Denomination of Stamps*</u>
\$ 9.00 to \$14.99	\$.40
15.00 to 20.99	.60
21.00 to 26.99	.76
27.00 to 32.99	.92
33.00 to 38.99	1.08
39.00 to 44.99	1.20
45.00 to 50.99	1.32
51.00 to 56.99	1.44
57.00 to 62.99	1.56
63.00 to 68.99	1.72
69.00 and over	1.88

* One-half contributed by fishermen, one-half by buyer.

TABLE II
SALT CODFISH DIVISORS

Salted Groundfish Products	Production Representing 1 Week
Extra Dry (Gaspé Cure)	2 cwt.
Dry (slack, light, and heavy salted)	3 cwt.
Semi-dry	4 cwt.
Ordinary Cure	5 cwt.
Wet Salted	6 cwt.
Cod Oil	5 drums or 225 gallons
Cod Livers	15 drums or 675 gallons

TABLE III
FISHERMEN'S CONTRIBUTION AND RATES OF BENEFIT

Average of Fisherman's Weekly Contributions	Rate of Benefit	
	Without Dependant	With Dependant
Cents		
Less than 25	\$ 6.00	\$ 8.00
25 and under 34	9.00	12.00
34 and under 42	11.00	15.00
42 and under 50	13.00	18.00
50 and under 57	15.00	21.00
57 and under 63	17.00	24.00
63 and under 69	19.00	26.00
69 and under 75	21.00	28.00
75 and under 82	23.00	30.00
82 and under 90	25.00	33.00
90 and over	27.00	36.00

17. Table I shows the eleven rates of contribution based on the amount of fishermen's earnings. For cured fish the same basic table is used but the methods of reaching the fishermen's earnings is different from that of fresh fish, since the former includes additional labour and may represent the entire season's catch. The net value (gross less 25%) is divided by the number of fishermen to arrive at the net earnings of each. The quantity sold in respect of each member of the crew is divided by a divisor factor to obtain the number of weeks' production represented. The divisors for salted fish are shown in Table II.

18. Having obtained the number of weeks' effort represented by the production, reference is made to 'tables of contributions for fishing' to determine the denomination of stamps to be used over that same number of weeks. These tables are merely the Range of Earnings column in the first table multiplied by different numbers of weeks (1 to 36). The table corresponding to the number of weeks as worked out with the divisor is selected and the net value per fisherman of the total catch is matched with this table in order to find the denomination of the stamp.

19. The number of weekly stamps thus determined are recorded first in those weeks in which there are no other contributions, working back from the week in which delivery was made. Then if there are still some stamps to be entered in the book they are affixed as additional contributions, one in each calendar week, again working back from the week of delivery but not beyond the first week of May.

20. Finally, to be eligible for seasonal benefit, a fisherman must have at least 15 weeks' contributions. The weekly rate of benefit is based on the average value of contributions made since the previous March. Without a dependant a fisherman's benefit ranges from \$6 to \$27; with a dependant the

range is from \$8 to \$36 per week. Benefits are illustrated in Table III.

21. During the seasonal benefit period a fisherman gets five weeks' benefit for every six contribution weeks since the previous March, with a minimum of 13 weeks but not extending beyond the week in which May 15 falls. There is one week waiting time at the beginning of the benefit period.

22. To examine some of the effects this scheme has on the fishery and on the disposition of the catch a number of tables have been prepared. Since salt fish production by fishermen is concentrated largely in Newfoundland the data in the tables relate to catch levels and methods used in that province. Therefore, the model in Table IV is based on information contained in the Proskie studies⁽¹⁾. The average landings for the small class of trap-long liners were adjusted to conform more closely to an 'average' Newfoundland east coast inshore fishing enterprise. This 'average' enterprise is located fairly close to a filleting plant so that the choice of disposition is wide. The Commission realizes that many enterprises obtain fishing stamps from the sale of lobsters, salmon and pickled fish and that the existence of such stamps may affect the disposition of cod landings. However, in order to simplify the calculations and to stay as close as possible to the subject under discussion, only the cod fishery is considered.

At the end of the trap fishing season (mid August) the boat is generally hauled up for painting and repairs. Traps are also cleaned and dried. Depending on the weather, this may take up to a week. At this point the four men who composed the crew in one boat for the trap fishery split up, one or two of them leaving the original boat, and perhaps also the fishery. This pattern is included in the preparation of the model, and the quantities

(1) Proskie, John, Costs and Earnings of Selected Fishing Enterprises Atlantic Provinces. Primary industry studies No. 1, Vol. 12, Ottawa, 1964.

and gross value of the landings made with different numbers in the crew are shown. Shore workers are not included, as in most enterprises they are unpaid dependent members of the family and are not eligible for coverage. For simplicity in later calculations the gross values of fresh fish sales are rounded off to the nearest dollar, and the net value per crew member for unemployment insurance purposes is considered to be the fisherman's actual income from fishing. Prices for fresh and salted fish are based on those actually paid to fishermen in the 1961 season. The study traces the income of one fisherman with dependants attached to this enterprise throughout the fishing season. All salt fish sales were made in the last half of November.

24. Table V compares the financial advantages of seven alternate courses open to the enterprise. This table gives by no means all of the alternatives nor is it necessarily the best example to illustrate these points. For instance, by spreading his salt fish sales over a period of time the fisherman may raise the average value of the stamp and reduce the benefit period according to his needs. The next fishing season may commence before the end of the benefit period so that he will lose benefits during the first two weeks (May 1 - 15) anyway, unless he salts his catch for later sale or holds it alive as many do with lobsters. Therefore, it would pay him to sell his salted fish earlier. In this way the stamps can be added to weeks in which he already had a contribution in order to raise the average value of his contributions. Otherwise they would be put into weeks in which no contribution had been made, thus lowering the average value of the stamp but extending the benefit period. No comparison of the many different courses open to a fisherman with respect to this factor was made. Finally, in the preparation of this table the Commission recognizes that in Columns 4 and 5 and to

some extent in Columns 2, 6 and 7 the time spent salting may in practice have reduced the time available for catching and total landings in these cases were probably less than indicated.

25. The most striking factor is the relative scale of unemployment benefits. Total benefits paid range from 32 per cent to as high as 46 per cent of net income from codfish sales. In terms of landed weight, benefits vary from over $\frac{1}{2}$ ¢ per pound if all the fish is sold in the fresh state to nearly 1¢ per pound if all the catch is light salted. The extent to which the unemployment insurance scheme subsidizes the inshore fishery and particularly the production of salt cod is quite apparent from these figures.

26. Fishermen naturally try to maximize their benefits from a given catch. But first the individual must qualify, and this is not difficult particularly if he salts his catch. To get 15 weeks contributions he must light salt 45 quintals which is equivalent to only 20,160 lbs. of fresh fish. This amount could be caught in one week's fishing. By selling fish in the fresh state he would have to catch at least 534 lbs. per week at $2\frac{1}{2}$ ¢ per lb. for 15 weeks, a total of only 8,010 lbs. This is less than half the total required to qualify by salting the catch, but the period of fishing is very much longer. Furthermore, if the salted fish is valued at \$16 per quintal, the average value of the fishermen's contribution is 66¢ compared with only 20¢ for the fresh fish giving the salted fish producer an advantage of \$16 per week in benefits. Looking at it in another way, he would have to sell 2,667 lbs. of fresh fish in each of 15 weeks or a total of 40,000 lbs. to get the same benefit as he would receive from the 45 quintals of salt fish. Thus it is fairly easy to qualify for benefits but at this level of landings because of the better chance of catching the larger quantity over the shorter period as well as the advantage in benefits, the system is heavily weighted in favour of salted fish.

TABLE IV
SAMPLE INSHORE COD TRAP FISHING ENTERPRISE

Week	Landings (lbs.)	Gross Value	Less 25%	Value per Crew Member	Stamp Value Fresh Fish
		\$	\$	\$	\$
<u>May</u>					
1 - 7	1,100	25.00	18.75	6.25	—
8 - 14	500	11.00	8.25	2.75	—
15 - 21	3,300	74.00	55.50	13.87	.40
22 - 28	4,500	101.00	75.75	18.94	.60
<u>June</u>					
29 - 4	6,000	135.00	101.25	25.31	.76
5 - 11	23,800	536.00	402.00	100.50	1.88
12 - 18	32,000	720.00	540.00	135.00	1.88
19 - 25	31,100	700.00	525.00	131.25	1.88
<u>July</u>					
26 - 2	24,800	558.00	418.50	104.62	1.88
3 - 9	6,000	135.00	101.25	25.31	.76
10 - 16	7,000	157.00	117.25	29.44	.92
17 - 23	8,500	191.00	143.25	35.81	1.08
24 - 30	4,300	97.00	72.75	18.19	.60
<u>August</u>					
31 - 6	6,200	140.00	105.00	26.25	.76
7 - 13	1,000	23.00	17.25	4.31	—
14 - 20	2,600	58.00	43.50	14.50	.40
21 - 27	3,400	77.00	57.75	19.25	.60
<u>September</u>					
28 - 3	1,800	45.00	33.75	11.25	.40
4 - 10	3,100	78.00	58.50	19.50	.60
11 - 17	2,000	50.00	37.50	12.50	.40
18 - 24	2,300	58.00	43.50	14.50	.40
25 - 1	1,200	30.00	22.50	7.50	—
<u>October</u>					
2 - 8	1,900	57.00	42.75	14.25	.40
9 - 15	1,500	45.00	33.75	11.25	.40
16 - 22	—	—	—	—	—
23 - 29	2,300	69.00	51.75	17.25	.60
<u>November</u>					
30 - 5	1,800	54.00	40.50	13.50	.40
6 - 12	1,300	39.00	29.25	9.75	.40
<u>Total</u>	158,500	\$3,567.00	(4 men)	\$842.80	\$18.40
	26,800	696.00	(3 men)		
	185,500	\$4,263.00			

Price: May, June, July, August 2½¢
September 2½¢
October, November 3¢

Number in Crew: May 1 - 14 : 3
May 15 - Aug. 13: 4
Aug 14 - Nov. 12: 3

TABLE V

COMPARATIVE INCOMES AND UNEMPLOYMENT BENEFITS USING ALTERNATE MEANS OF CATCH DISPOSITION,

ONE CREW MEMBER WITH DEPENDANTS FISHING ALL SEASON

	1	2	3	4	5	6	7
Per Man	All Fish Sold Fresh	As Col. 1 but Fish in Excess of that Required for Maximum Stamp Value Salted (June 5 - July 2)	As Col. 1, but Small Catches (May 1-28 and Aug 7-Nov 12) Salted	All Fish Light Salted	All Fish Heavy Salted	No Fishing after 18 Weeks (Sept 24). Surplus as in Col. 2, and Catch May 1-14 Salted	No Fishing after 15 Weeks (Sep 3) rest as in Col. 6
-Total Landings lbs.	48,558	48,558	48,558	48,558	48,558	43,825	42,758
-Sold Fresh lbs.	48,558	36,986	37,425	-	-	33,118	31,186
-Light Salted Dry Qtls.	-	-	26	108	-	27	27
-Heavy Salt Wet cwts.	-	47	-	-	197	-	-
-Contribution Weeks	23	28	19	36	33	27	24
-Average Value of Stamps	\$0.40	\$0.46	\$0.58	\$0.54	\$0.46	\$0.48	\$0.51
-Duration of Benefit Weeks	19	23	16	30	28	23	20
-Rate of Benefit	\$15.00	\$18.00	\$24.00	\$21.00	\$18.00	\$18.00	\$21.00
-Total Benefit	\$285.00	\$414.00	\$384.00	\$483.00	\$414.00	\$414.00	\$420.00
-Net Income from Fresh Fish Sales	\$842.80	\$647.43	\$631.68	-	-	\$564.93	\$516.70
-Net Income from Light Salted	-	-	\$316.00	\$1,271.00	-	\$321.00	\$321.00
-Net Income from Heavy Salted	-	\$247.00	-	-	\$1,034.00	-	-
-Net Income from Fish Sales	\$842.80	\$894.43	\$947.68	\$1,271.00	\$1,034.00	\$885.93	\$837.70
-Income from Fish Sales & UI	\$1,127.80	\$1,308.43	\$1,331.68	\$1,754.00	\$1,448.00	\$1,299.93	\$1,257.70
-Value of UI per 100 lbs. Landed	\$0.59	\$0.85	\$0.79	\$0.99	\$0.85	\$0.94	\$0.98

1 The actual duration of seasonal benefits is not over 23 weeks.

27. This is further confirmed by a closer examination of Table V which is based on the model in Table IV. The lowest total benefits and the lowest benefit in terms of value per pound landed are obtained when the entire catch is sold in the fresh state; the highest when the same catch is entirely light salted. A most interesting feature is the fact that the second highest benefits are obtained when the fisherman stops fishing after 15 weeks, and salts that part of his catch which, being above the weekly maximum, cannot be credited for unemployment insurance purposes if sold fresh. If he fished for three more weeks his total income from fish sales and unemployment insurance would be only \$39 more or \$13 per week.

28. Before unemployment insurance was extended to fishermen, most of those who had access to a filleting plant sold their largest catches to that plant as they were too much to put away salted. Their smaller catches in the spring and autumn were salted partly because the volume was too small to warrant the cost of carrying it to the plant, partly because small catches are usually made in the line trawl fishery where the fish is larger and thicker and more valuable when salted and partly because the fishermen have more time to spend in shore work when catches are low. This situation is illustrated in Column 3.

29. Since the advent of unemployment insurance, however, it no longer pays a fisherman to fish late into the autumn, if he has already qualified for benefits. Not only is the weather bad and catches small but a comparison of Columns 3 and 7 shows the difference in total income from fishing and unemployment insurance is \$72 which, over 9 weeks' fishing, is only \$8 per week. The unemployment benefits received in Column 3 for 27 weeks' fishing (19 contribution weeks) are actually \$36 less than those received in Column 7 if he had only fished for 18 weeks (15 contribution weeks) but salted the surplus for which he could get no credit.

30. As most fishermen cannot salt the heavy trap fish landings, filleting plants obtain large quantities of raw material, though not necessarily enough, during the trap fishing season. However, after the middle of August when catches decline, they have to engage more collector boats or trucks and raise their prices in order to get a supply of fish. The longer filleting plants can operate and the more they can produce in this season the more economical their operation will be. However, it is precisely at this time that the unemployment insurance system is a strong inducement for an inshore fisherman to reduce his effort.

31. The Commission recognizes that in cases where fishermen have not qualified for benefits, unemployment insurance may increase fishing effort in the autumn. However, as fish prices rise it becomes easier to qualify and therefore fewer are being placed in this situation.

32. Copes in his recent paper⁽²⁾ on the subject had this to say: "There is indeed evidence that since the introduction of unemployment insurance there has been a sudden and clear change, with the main inshore fishing effort being completed at an earlier date. This suggests that unemployment insurance is giving incentive to the contraction of an already short season, further limiting the productivity of the inshore fishery. In other respects, also, the unemployment insurance scheme operates as a distinct disincentive to work. Many fishermen are disinclined to accept casual employment that may be available in the winter season as this involves the loss of their unemployment benefits".

33. During the glut period, where conditions permit, fishermen salt as much as possible of the fish they catch in excess of that required to give them a maximum stamp. They might catch the maximum in one or two days then

(2) Copes, Parzival, Government Assistance, Productivity and Income in the Fishing Industry of Newfoundland. Paper presented to the Annual Meeting of the Canadian Political Science Association, Charlottetown, June 1964.

all other landings in that week may be salted. This also tends to reduce the quantity available to filleting plants, particularly in seasons in which there is doubt about the success of the year's 'voyage'. On this point Copes states that: "Most inshore fishermen seem to find this the surest way of acquiring stamps. The bulk of the inshore cod catch is being salted even when the processing plants are operating far below capacity and urgently soliciting additional deliveries of fresh cod".

34. In spite of these factors, the frozen fish industry has steadily gained ground. On the other hand during the public hearings there were many comments from the frozen fish industry about the adverse effect of unemployment insurance on their supply of fish. Some of those operating trawlers and draggers found it more difficult to obtain crews during the seasonal benefit period than at any other time of the year.

35. In fisheries such as the Newfoundland inshore fishery where the people have become conditioned by seasonal factors, the practice of foregoing additional income in favour of leisure time is traditional. In some areas this feeling is so deeply ingrained that many employed off the island in year-round fishing or other industries often drift back home again for the winter months. They leave their jobs for no better reason than they didn't like them, which usually means that they intend to continue to spend the winter doing nothing. A scheme such as unemployment insurance, when imposed into a situation of this kind has unfortunate results, particularly on those inclined to "rest on their oars".

36. Today when a fisherman is asked if he had a good season he replies stating whether or not he qualified for unemployment. This has become the guidepost of success or failure; in fact fishing is for some the means to

qualify for government assistance. Hence the term 'fishing for stamps'.

37. The importance of unemployment insurance to the fishermen can be seen in some of the methods they use to qualify and maximize their benefits. By 'timing of deliveries' one week's catch or a portion of it can be held over to the following week so that both will count as contribution week. By selling part of the fresh fish catch to one buyer and part to another they can get a higher average value of stamps. There are always some catch transfers between fishermen since an extra stamp is worth more to one who has not qualified than to one who has. One fisherman is known to have bought a quantity of salted fish at a high price some distance from his home outport, taken it back and sold it to his local merchant as if it were part of his own catch. The transaction was expensive but well repaid in unemployment benefits.

38. The Commission recognizes the continuing need for a system that will raise incomes in areas of chronic unemployment. On the other hand measures to accomplish this should not retard normal economic development or stifle individual initiative. The present system could be adjusted in order to promote economic development more along the lines suggested in this report. As a general objective the benefits to be obtained from fresh fish sales and salt fish sales should be brought closer together. Benefits might even be increased and at the same time made more difficult to obtain. As already mentioned recent price increases have made it easier to qualify for benefits lowering the volume required to get the highest value of stamps.

39. Comment was also made at the hearings that unemployment insurance, broadly speaking, only helped those who landed the largest quantity of fish. Fishermen who experienced poor fishing received nothing. The Commission

acknowledges that this is indeed true. One alternative that has been suggested is catch failure insurance. Apart from the obvious administrative difficulties of such a plan, the Commission feels that, under present conditions of the resource base, catch failure insurance, by making those who fish successfully subsidize those who do not, even the successful ones will be made uneconomic. The relationship between the numbers of inshore fishermen and the resource is already considered critical; there can be no sustained increase in the inshore catch and more increases in the numbers of fishermen and catching power will further reduce productivity in the long run. The continued growth in population makes this a self-perpetuating problem. It is obvious that measures suggested here could only be effectively carried out if steps were simultaneously taken to enable the less-successful fishermen to move out of the industry. These will have to be trained to take other jobs. For those who remain in the fishery every effort should be made to raise their productivity.

40. One weakness of any contributory scheme is the effect it has on the state of mind of those contributing to it. There is resentment at being compelled to contribute but once having done so every effort is made to get the greatest possible benefit. The Gill Committee had this to say: "The problems associated with breaches in the letter and spirit of the Act have been aggravated by developments in certain public attitudes that have become more prominent in recent years. These attitudes have been influenced unquestionably by the changes that have been made in the Act and its use for purposes inconsistent with the proper operation of an unemployment insurance plan. The distorted views regarding the purposes of an unemployment insurance plan have compounded abuses, and many individuals have come

to consider it a vested right to recover their contributions, in whole or in part, regardless of the true intent of the system".

41. This Commission feels that the unemployment insurance plan for fishermen is a good example of this, and agrees with the Gill Committee's recommendation that a separate plan be instituted for fishermen. This plan could be modeled on the present one, but to promote economic development it should incorporate some of the changes already suggested and not contain any aspects of a catch failure insurance program. It could be modified periodically to meet particular needs as they arise, while annual losses would be met from the Consolidated Revenue Fund.

42. The Salt Assistance Program, administered by the Fisheries Prices Support Board, has also favoured production of salted fish. The Board was established in 1944, and in 1947 it was empowered to support prices of fisheries products by either purchase at a prescribed price or through deficiency payments to producers. "The Act furthermore directs that in prescribing prices the Board shall endeavour to ensure adequate and stable returns for fisheries by promoting orderly adjustment from war to peace conditions and shall endeavour to secure a fair relationship between the returns from fisheries and those from other occupations"⁽³⁾.

43. In 1955 a vote passed by Parliament provided moneys for the payment of assistance to salt fish producers in the amount of fifty per cent of the cost of salt used in their 1955 production. The administration of this program was given to the Board. Salt assistance is a means of augmenting a fisherman's income, in this case by reducing his costs. Payment is not

(3) Fisheries Prices Support Board, Annual Report 1950-1951.

conditional upon minimum quality standards. Thus it has an effect similar to Unemployment Insurance. By supporting the salt fish sector of the industry it contributes to some extent to the maintenance of the status quo.

44. The scale of payments to fishermen under the plan is illustrated in Table VI and Table VII. Table VI shows that since 1960 the largest payments per claim were made in Newfoundland. By far the greater number of fishermen claimants, as expected, are also in this province while the number of plants making claims is greater in Nova Scotia. The number of fishermen represented by these claims is not known and therefore the average payment per fisherman cannot be ascertained.

TABLE VI
SALT ASSISTANCE PAYMENTS

AVERAGE PAYMENTS PER FISHERMAN'S CLAIM* 1955 - 1963

Province	1963	1962	1961	1960	1959	1958	1957	1956	1955
	\$	\$	\$	\$	\$	\$	\$	\$	\$
Newfoundland	65	69	59	79	80	57	71	70	65
Nova Scotia	44	43	48	57	70	68	81	79	102
New Brunswick	22	15	21	20	64	52	31	53	45
Prince Edward Island	40	20	33	23	18	28	33	28	36
Quebec	52	50	32	45	88	60	46	34	36

* A claim usually represents between 1 and 4 men but in some cases (Labrador Floater Fishery) up to 10 men may be represented.

TABLE VII
ESTIMATED AVERAGE PAYMENT PER DRY QUINTAL PRODUCED
NEWFOUNDLAND 1955-1963

1963	1962	1961	1960	1959	1958	1957	1956	1955
\$.62	\$.68	\$.72	\$.69	\$.60	\$.74	\$.58	\$.51	\$.48

Source: Annual Reports Fisheries Prices Support Board 1955-1963.

45. Table VII shows the estimated average amount paid under the Act per dry quintal of salt fish produced. The actual amount applying to salt cod may be slightly less than indicated since payments on salt used in pickling herring, mackerel and turbot are also included. On the other hand, not all of the salt used in curing codfish is claimed for assistance. The amount paid per quintal has increased slightly over the period, partly due to an increase in the price of salt and partly to an increase in the amount of salt on which claims are made. Payments, on the basis of fresh cod put to salt, amount to about 15¢ per hundred pounds. Compared with the possible benefits available from unemployment insurance, it is very small.

46. The Commission therefore feels that salt assistance is not a significant factor in the fisherman's decision whether to salt or sell to a freezing plant if he has that choice. Nevertheless some fishermen have grown to depend on salt assistance, particularly when the cheques arrive just before Christmas. Intended originally to apply for only one year, the program has now become more or less permanent.

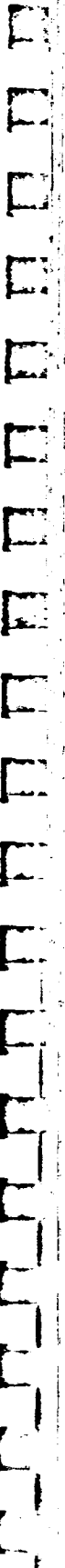
47. As already mentioned salt fish prices began to climb after 1955 and today they are at record high levels. The need for price support in the salt cod industry has therefore largely disappeared. The Board has consequently turned to other measures such as the community stage program, and the attempt to develop production and markets for frozen turbot. Programs of this type are sound and could play an important role in the implementation of the Commission's recommendations.

48. Under these circumstances the money allocated for salt assistance would be more effective if applied to a positive economic development program. Salt assistance, like unemployment insurance was designed as a measure of income support in an industry characterized by underemployment. In so doing,

it has contributed to attracting even more people into the industry, a factor which has reduced the productivity of those already in it. This in turn increases the need for more income support.

49. It becomes necessary therefore to distinguish between those measures which promote real economic development and those which have a tendency to perpetuate the current problem. The two purposes are incompatible, and can be applied at the same time only at great cost to the economy.

APPENDIX



WEIGHTS AND MEASURES USED

<u>TERM</u>	<u>DESCRIPTION</u>
cwt.	100 lbs.
ton	1,000 kgs. or 2,000 lbs. as noted.
quintal	112 lbs.
draft	224 lbs.
landed weight	gutted head-on
product weight	weight as offered for sale
wet weight	weight before drying

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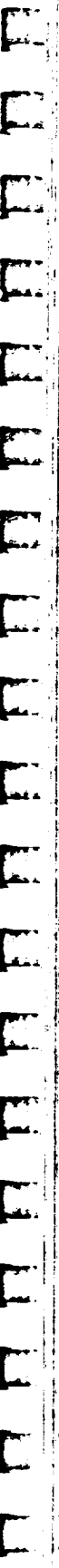


Table 1

CATCH OF FISH: WORLD, NORTH AMERICA, AND CANADA: 1938 - 1964ALL SPECIES

(Millions of Metric Tons)

Year	World Production	North America		Canada		Canada	Atlantic Coast		
	<u>All Species</u> Live Weight	<u>Production</u> Live Weight	<u>% World</u>	<u>Production</u> Live Weight	<u>% World</u>	<u>Production</u> Landed Weight	<u>Production</u> Landed Weight	<u>% World</u>	<u>%Canada</u>
1964									
1963	46.40	4.31	9.3	1.19	2.6	1.07	.65	1.4	60.7
1962	45.30	4.49	9.9	1.12	2.5	1.01	.65	1.4	64.4
1961	42.00	4.34	10.3	1.02	2.4	.92	.59	1.4	64.1
1960	38.50	4.09	10.6	.93	2.4	.84	.65	1.7	77.4
1959	36.10	4.28	11.9	1.05	2.9	.97	.64	1.8	66.0
1958	32.60	4.00	12.3	1.01	3.1	.93	.60	1.8	64.5
1957	30.91	3.98	12.9	1.00	3.2	.92	.64	2.1	70.0
1956	29.91	4.33	14.5	1.11	3.7	1.02	.66	2.2	64.7
1955	28.33	3.95	13.9	.97	3.4	.89			
1954	27.01	3.97	14.7	1.03	3.8	.96			
1953	25.24	3.76	14.9	.92	3.6	.86			
1952	24.52	3.46	14.1	.94	3.8	.85			
1951	22.75	3.52	15.5	1.01	4.4	.93			
1950	20.23	3.78	18.7	1.05	5.2	.96			
1949	19.41	3.63	18.7	1.00	5.2	.90			
1948	10.09	3.62	19.0	1.05	5.5	.96			
1947	17.94	3.38	18.8	.99	5.5				
1938	20.50	3.15	15.4	.84	4.1	.76			

Source: F. A. O.

Table 2

LANDINGS OF CODS, HAKES, HADDOCKS, ETC.: BY MAJOR AREAS AND COUNTRIES: 1938, 1948, 1957 - 1963

(Landed Weight)
(Thousand Metric Tons)

Year	World	North America		Europe								Japan	U.S.S.R.	Total Major Countries
		Total	Canada	Total	Denmark	France	Germany Fed.	Iceland	Norway	Spain	United Kingdom			
1963	4,900.0	550.2	368.9	2,199.6	205.0	187.8	174.9	255.5	505.1	215.3	555.1	620.2	1,013.4	4,102.2
1962	4,570.0	576.9	370.9	2,245.7	222.6	182.0	190.1	243.5	417.8	168.4	571.2	528.6	881.0	3,776.1
1961	4,140.0	534.2	331.3	2,363.2	145.4	160.0	177.7	262.1	432.5	167.1	538.6	421.1	767.3	3,423.1
1960	4,170.0	583.3	371.0	2,182.5	83.4	179.7	165.7	299.8	427.9	161.9	574.1	447.5	672.5	3,383.5
1959	3,890.0	619.9	390.0	2,150.2	94.6	175.9	152.8	268.0	458.5	151.4	596.7	442.6	414.7	3,145.2
1958	3,730.0	566.7	335.8	2,179.5	75.3	n.a.	170.1	275.5	430.4	155.1	631.6	344.9	367.6	2,786.3
1957	3,870.0	648.9	395.7	n.a.	87.2	n.a.	191.7	244.5	402.0	148.6	637.6	347.2	422.6	2,877.1
1948	3,040.0	574.2	379.6	1,789.6	55.9	99.4	146.4	221.3	303.3	114.7	618.2	183.8	n.a.	2,122.6
1938	2,840.0	540.9	346.8	1,838.9	25.2	111.9	255.6	89.2	318.8	67.3	612.9	194.1	n.a.	2,021.8

Source: F. A. O.

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Table 3 LANDINGS OF CODS, HAKES, HADDOCKS, ETC.: BY MAJOR AREAS AND COUNTRIES: 1938, 1948, 1957 - 1963

PERCENTAGE DISTRIBUTION

Year	World	North America		Europe								Japan	U.S.S.R.	Total Major Countries
		Total	Canada	Total	Denmark	France	Germany Fed.	Iceland	Norway	Spain	United Kingdom			
1963	100.0	11.2	7.5	44.9	4.2	3.8	3.6	5.2	10.3	4.4	11.3	12.7	20.7	83.7
1962	100.0	12.6	8.1	49.2	4.9	4.0	4.2	5.3	9.1	3.7	12.5	11.6	19.3	82.7
1961	100.0	12.9	8.0	57.1	3.5	4.3	4.3	6.3	10.4	4.0	13.0	10.2	18.5	82.5
1960	100.0	14.0	8.9	52.4	2.0	4.3	4.0	7.2	10.3	3.9	13.8	10.7	16.1	81.2
1959	100.0	15.9	10.0	55.3	2.4	4.5	3.9	6.9	11.8	3.9	15.3	11.4	10.7	80.8
1958	100.0	15.2	9.0	58.4	2.0	n.a.	4.6	7.4	11.5	4.2	16.9	9.2	9.9	74.7
1957	100.0	16.8	10.2	n.a.	2.3	n.a.	5.0	6.3	10.4	3.8	16.5	9.0	10.9	74.4
1948	100.0	18.9	12.5	58.9	1.8	3.3	4.8	7.3	10.0	3.8	20.3	6.0	n.a.	69.8
1938	100.0	19.1	12.2	57.7	0.9	3.9	9.0	3.1	11.2	2.4	21.6	6.8	n.a.	71.1

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Source: F. A. O.

Table 4

LANDINGS OF FLOUNDERS, HALIBUTS, SOLES, ETC: WORLD AND CANADA1938, 1948, 1957 - 1963

(Landed Weight - Thousand Metric Tons)

Year	World Total	Canada	Canada % World	Atlantic Coast	Atlantic	
					% W.T.	% Can.
1963	910.0	79.8	8.8	60.2	6.6	75.4
1962	1,200.0	68.4	5.7	49.7	4.1	72.7
1961	1,290.0	68.4	5.3	52.1	4.0	76.2
1960	1,170.0	77.6	6.6	58.5	5.0	75.5
1959	850.0	62.2	7.3	45.8	5.4	73.6
1958	760.0	59.2	7.8	42.5	5.6	71.8
1957	660.0	58.4	8.8	43.2	6.5	74.0
1948	470.0	20.5	4.4	6.0	1.3	29.3
1938	330.0	9.8	3.0	3.9	1.2	39.8

Source: F. A. O.

Table 5 LANDINGS OF HERRING, SARDINES, ANCHOVIES ETC: WORLD AND CANADA
1938, 1948, 1957 - 1963
(Landed Weight - Thousand Metric Tons)

Year	World Total	Canada	Canada % World	Atlantic Coast	Atlantic	
					% W.T.	% Can.
1963	14,770.0	373.7	2.5	114.0	0.8	30.5
1962	14,570.0	313.8	2.2	111.8	0.8	35.6
1961	12,430.0	291.1	2.3	87.7	0.7	30.1
1960	10,090.0	199.4	2.0	114.3	1.1	57.3
1959	8,860.0	315.5	3.6	114.1	1.3	36.2
1958	7,220.0	294.2	4.1	110.4	1.5	37.5
1957	7,090.0	238.7	3.4	104.7	1.5	43.9
1948	4,660.0	359.6	7.7	170.2	3.7	47.3
1938	4,740.0	199.4	4.2	92.1	1.9	46.2

Source: F. A. O.

Table 6

LANDINGS OF SALMON, TROUTS, SMELTS AND CAPELIN ETC: WORLD AND CANADA1938, 1948, 1957 - 1963

(Landed Weight - Thousand Metric Tons)

Year	<u>World Landings</u>	Canada	
		Landings	% World
1963	610.0	76.6	9.5
1962	540.0	101.3	18.8
1961	800.0	88.9	11.1
1960	610.0	65.4	10.7
1959	640.0	77.3	12.1
1958	730.0	115.3	15.8
1957	730.0	92.5	12.7
1948	520.0	87.6	16.8
1938	930.0	102.1	11.0

Source: F. A. O.

Table 7

WORLD CATCH AND UTILIZATION: 1952 - 1963

Disposition	1952	1956	1957	1958	1959	1960	1961	1962	1963
Live Weight: Million Metric Tons									
World Total Catch	27.0	29.9	31.1	32.6	36.1	38.5	42.0	45.3	46.4
Estimated Quantities used for:									
Marketing Fresh	11.0	12.6	13.5	14.3	15.2	15.6	15.9	16.2	16.4
Freezing	1.0	2.2	2.4	2.7	3.0	3.4	4.0	4.3	4.7
Curing	7.0	7.3	7.3	7.3	7.3	7.3	7.5	7.8	8.3
Canning	2.0	2.7	2.9	3.0	3.3	3.6	3.9	4.0	4.0
Reduction to Meal, Oil, etc.	4.0	4.1	4.0	4.3	6.3	7.6	9.7	12.0	12.0
Miscellaneous Purposes	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
PERCENTAGES (Totals = 100)									
World Total Catch	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Marketing Fresh	41.0	42.0	43.0	43.9	42.1	40.5	37.9	35.8	35.3
Freezing	4.0	7.0	8.0	8.3	8.3	8.8	9.5	9.5	10.1
Curing	26.0	25.0	24.0	22.4	20.2	19.0	17.8	17.2	17.9
Canning	7.0	9.0	9.0	9.2	9.1	9.4	9.3	8.8	8.6
Reduction to Meal, Oil, etc.	15.0	14.0	13.0	13.2	17.5	19.7	23.1	26.5	25.9
Miscellaneous Purposes	7.0	3.0	3.0	3.0	2.8	2.6	2.4	2.2	2.2
PERCENTAGES (1952 = 100)									
World Total Catch	100	112	115	120	133	141	153	166	171
Marketing Fresh	100	116	122	128	138	140	143	145	147
Freezing	100	219	238	268	298	338	387	426	466
Curing	100	103	104	104	101	103	103	111	119
Canning	100	135	145	150	165	175	195	200	200
Reduction to Meal, Oil, etc.	100	103	103	107	155	187	241	299	299
Miscellaneous Purposes	100	50	50	50	50	50	50	50	50

Source: F. A. O.

Table 8

WORLD CATCH AND ESTIMATED TOTAL INTERNATIONAL TRADEIN FISHERY COMMODITIES: 1948, 1958 - 1963

(Thousand Metric Tons - Live Weight)

	1948	1958	1959	1960	1961	1962	1963
Total World Catch	19,090	32,600	36,100	38,500	42,000	45,300	46,400
Catch of 140 Countries	15,350 ⁽¹⁾	28,140	30,680	33,080	36,580	39,880	40,980
Catch of 140 Countries as a Percentage of Total World Catch	80 ⁽¹⁾	86	85	86	87	88	88
Total International Trade of 140 Countries	2,815 ⁽¹⁾	3,040	9,120	10,490	12,440	14,880	15,280
Total International Trade of 140 Countries as Percentage of their Catch	19 ⁽¹⁾	29	30	32	34	37	37

Source: F. A. O.

(1) Data for 1948 are for 91 countries.

Table 9

TRENDS IN CATCH AND UTILIZATION: WORLD AND SELECTED COUNTRIES: 1963

(1952 = 100)

	Catch	Marketing Fresh	Freezing	Curing	Canning	Reduction
World	170.5	147.2	466.0	119.0	200.0	299.1
Canada	129.0	126.1	184.4	67.1	103.1	129.1 ⁽¹⁾
United States	115.5	120.9	110.9	112.6	99.3	129.2
Denmark	262.3	115.6	258.3	93.2	116.6	558.3
Faroe Islands	157.2	278.8	13,800.0	130.7	25.0	—
France ⁽²⁾	106.0	108.3	—	93.0	120.1	—
Iceland	195.3	161.1	133.1	117.3	125.0	1,811.7
Norway	76.9	76.3	273.6	68.9	89.8	63.4
Spain ⁽³⁾	179.0	153.9	—	156.5	189.5	5,517.3
United Kingdom	83.0	87.5	441.6	13.6	46.7	41.1

Source: F. A. O.

(1) 1956 = 100

(2) 1957 - 1962 (1957 = 100)

(3) 1952 - 1962

Table 10

INTERNATIONAL TRADE IN FISHERY PRODUCTS: EXPORTS OF 140 COUNTRIES

1938, 1949, 1958 - 1963

(Thousand Metric Tons - Product Weight)

Year	All Fishing Products	Fish, Dried, Salted or Smoked	Fish, Fresh, Chilled or Frozen
1963	5,252	541	1,403
1962	5,060	549	1,302
1961	4,441	552	1,127
1960	4,054	554	1,128
1959	3,736	574	1,057
1958	3,383	606	956
1949 ⁽¹⁾	2,083	520	749
1938 ⁽¹⁾	2,065	678	415

Source: F. A. O.

(1) Data for 1949 and 1938 on totals representing 110 countries.

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Table 11

FISH, DRIED, SALTED OR SMOKED:WORLD PRODUCTION AND TOTAL INTERNATIONAL TRADE: 1938, 1948, AND 1958 TO 1963

(Thousand Metric Tons - Product Weight)

		1938	1948	1958	1959	1960	1961	1962	1963
Fish, Dried, Salted or Smoked:	Production	1,245	1,344	2,770	2,699	2,692	2,702	2,795	2,985
	Exports	776	612	606	574	554	552	549	541
	%	62	46	22	21	21	20	20	18
Stockfish:(cod and similar species, dried, unsalted)	Production	36	13	56	58	52	50	44	43
	Exports	27	12	43	47	46	43	43	39
	%	75	92	77	81	88	86	98	91
Cods, Hakes, Haddocks, etc, salted	Production	339	287	366	345	376	399	445	(430)
	Exports	233	173	208	184	187	190	192	195
	%	69	60	57	53	50	48	43	45
Herring, dried or salted:	Production	488 ⁽¹⁾	529 ⁽³⁾	895	813	785	713	748	865
	Exports	311 ⁽¹⁾	278	155	132	100	88	90	93
	%	64	53	17	16	13	12	12	11
Sardines, anchovies, etc., dried or salted:	Production	-	-	238	235	225	245	233	257
	Exports	-	-	7	6	4	4	(4)	(4)
	%	-	-	3	3	2	2	2	2
Miscellaneous Fish Products:	Production	382 ⁽²⁾	284	970	1,005	990	1,040	1,075	(1,130)
	Exports	175 ⁽²⁾	51	118	130	141	146	139	137
	%	46	18	12	13	14	14	13	12
Herring, smoked or smoked-frozen:	Production	-	231 ⁽⁴⁾	60	59	60	54	54	(55)
	Exports	-	16	18	18	18	16	15	15
	%	-	7	30	31	30	30	28	27
Miscellaneous fish products:	Production	-	-	185	184	204	201	196	(205)
	Exports	-	-	1	1	1	1	1	1
	%	-	-	1	1	5	5	5	5

Source: F. A. O.

(1) Includes smoked or smoked frozen herring and sardines and anchovies.

(2) Includes smoked or smoked frozen miscellaneous fish products.

(3) Includes sardines and anchovies.

(4) Includes all smoked fish.

Table 12

FISH, DRIED, SALTED OR SMOKED

EXPORTS BY CONTINENT: 1938, 1948 AND 1957 - 1963

(Q - Thousand Metric Tons, V - Thousand U.S. Dollars)

		1938 ⁽¹⁾	1948	1957	1958	1959	1960	1961	1962	1963
Grand Total	Q	776.0 ⁽²⁾	612.4 ⁽²⁾	628.0	606.0	574.0	554.0	552.0	549.0	541.0
(137 countries)	V	65,593.0	159,062.0	185,590.0	178,073.0	175,530.0	182,276.0	182,946.0	189,950.0	195,362.0
Africa	Q	24.8	40.0	52.0	48.0	49.0	46.0	56.0	46.0	43.0
(46 countries)	V	2,412.0	8,500.0	12,000.0	11,300.0	11,400.0	11,500.0	15,072.0	12,380.0	10,560.0
North America	Q	119.1 ⁽²⁾	132.4 ⁽²⁾	81.0	74.0	71.0	68.0	65.0	60.0	70.0
(27 countries)	V	10,609.0	39,797.0	28,382.0	26,006.0	25,566.0	25,977.0	23,612.0	23,151.0	26,905.0
South America	Q	.4	0.3	0.1	0.1	0.2	0.4	0.4	0.7	0.4
(11 countries)	V	23.0	71.0	28.0	46.0	49.0	73.0	85.0	121.0	62.0
Asia	Q	126.9	57.0	78.0	80.0	74.0	66.0	68.0	51.0	50.0
(24 countries)	V	12,257.0	14,000.0	23,430.0	22,900.0	23,300.0	23,050.0	22,910.0	18,820.0	19,650.0
Europe	Q	475.1	383.1	416.0	391.0	346.0	331.0	332.0	351.0	334.0
(25 countries)	V	40,263.0	96,630.0	121,170.0	114,739.0	108,393.0	113,462.0	115,327.0	128,081.0	129,950.0
Oceania	Q	.1	---	---	---	---	---	---	---	---
	V	32.0	64.0	10.0	8.0	15.0	55.0	12.0	22.0	32.0
U.S.S.R.	Q	---	---	1.0	13.0	34.0	43.0	31.0	40.0	44.0
	V	---	---	570.0	3,074.0	6,807.0	8,159.0	5,928.0	7,375.0	8,203.0

Source: F. A. O.

(1) Based on 110 countries.

(2) Includes Newfoundland.

Table 13

FISH, DRIED, SALTED OR SMOKED

EXPORTS BY MAJOR COUNTRIES: 1938, 1948 AND 1957 TO 1963

(Q - Thousand Metric Tons, V - Thousand U.S. Dollars)

		1938	1948	1957	1958	1959	1960	1961	1962	1963
Canada	Q	110.5	126.0	71.3	65.8	61.5	60.2	56.2	51.9	61.9
	V	9,265.0	37,675.0	25,565.0	23,388.0	22,724.0	23,130.0	20,184.0	19,969.0	23,716.0
Faroe Islands	Q	---	32.9	38.8	38.4	29.5	32.2	31.4	42.6	41.8
	V	---	11,599.0	10,955.0	10,541.0	7,907.0	9,089.0	9,057.0	12,669.0	14,004.0
France	Q	21.0	2.5	28.7	26.5	25.1	24.9	24.3	24.6	20.6
	V	1,947.0	959.0	9,374.0	8,730.0	8,564.0	9,767.0	9,007.0	8,967.0	8,483.0
Iceland	Q	80.2	23.5	66.1	60.6	53.8	48.1	68.9	69.3	---
	V	6,153.0	7,134.0	19,184.0	17,196.0	16,250.0	14,855.0	21,905.0	22,313.0	---
Netherlands	Q	76.8	48.9	52.0	45.3	41.8	43.2	45.4	39.2	42.4
	V	3,954.0	10,499.0	9,228.0	8,858.0	8,962.0	9,451.0	9,856.0	10,456.0	11,097.0
Norway	Q	110.0	169.2	155.4	149.1	134.5	112.9	74.6	83.4	78.5
	V	12,558.0	41,509.0	53,480.0	51,380.0	50,444.0	50,680.0	39,900.0	43,287.0	43,007.0
Spain	Q	3.4	0.8	10.2	8.4	8.9	19.0	36.4	38.1	30.2
	V	528.0	508.0	2,149.0	1,823.0	1,962.0	4,863.0	9,370.0	12,848.0	13,401.0
U.S.S.R.	Q	---	---	1.3	13.4	34.3	43.1	31.4	40.5	43.5
	V	---	---	570.0	3,074.0	6,807.0	8,159.0	5,928.0	7,375.0	8,203.0
Total Eight Countries	Q	401.9	403.8	423.8	407.5	389.4	383.6	368.6	389.6	318.9
	V	34,405.0	109,883.0	130,505.0	124,990.0	123,620.0	129,994.0	125,207.0	137,884.0	121,911.0
Percent of World Total	Q	51.8	65.9	67.5	67.2	67.8	69.2	66.8	71.0	58.9
	V	52.5	69.1	70.3	70.2	70.4	71.3	68.4	72.6	62.4

Source: F. A. O.

Table 14

FISH, DRIED, SALTED OR SMOKED

IMPORTS BY CONTINENT - 1938, 1948 AND 1957 TO 1963

(Q - Thousand Metric Tons, V - Thousand U.S. Dollars)

		1938	1948	1957	1958	1959	1960	1961	1962	1963
Grand Total	Q	678.6	532.0	652.0	617.0	600.0	584.0	549.0	536.0	560.0
(137 countries)	V	75,282.0	157,168.0	208,109.0	194,243.0	190,517.0	203,820.0	197,541.0	193,944.0	207,726.0
Africa	Q	42.0	43.0	101.0	94.0	96.0	102.0	104.0	104.0	107.0
(46 countries)	V	4,933.0	13,025.0	40,690.0	37,850.0	40,648.0	43,980.0	44,023.0	42,580.0	39,850.0
North America	Q	80.6	82.0	82.0	82.0	85.0	83.0	72.0	74.0	81.0
(27 countries)	V	8,634.0	28,250.0	30,439.0	30,447.0	33,002.0	33,719.0	28,960.0	31,100.0	31,890.0
South America	Q	22.2	23.0	40.0	21.0	20.0	26.0	32.0	33.0	36.0
(11 countries)	V	2,460.0	12,950.0	22,410.0	10,836.0	10,532.0	14,511.0	18,728.0	17,820.0	19,490.0
Asia	Q	180.7	72.0	113.0	112.0	103.0	109.0	88.0	70.0	79.0
(24 countries)	V	19,837.0	21,270.0	35,550.0	33,750.0	31,500.0	36,800.0	28,590.0	23,865.0	28,100.0
Europe	Q	352.2	310.0	245.0	248.0	234.0	232.0	240.0	234.0	233.0
(25 countries)	V	39,287.0	81,100.0	68,060.0	71,800.0	66,220.0	69,200.0	73,740.0	73,090.0	81,575.0
Oceania	Q	.9	2.0	2.0	5.0	4.0	4.0	4.0	4.0	4.0
(3 countries)	V	131.0	573.0	780.0	1,989.0	1,449.0	1,604.0	1,573.0	1,847.0	2,073.0
U.S.S.R.	Q	---	---	69.0	55.0	53.0	28.0	9.0	17.0	20.0
	V	---	---	10,180.0	7,571.0	7,166.0	3,986.0	1,927.0	3,642.0	4,748.0

Source: F. A. O.

Table 15

FISH DRIED, SALTED, OR SMOKEDIMPORT BY MAJOR COUNTRIES: 1938, 1948 AND 1957 - 1963

		1938	1948	1957	1958	1959	1960	1961	1962	1963
Africa: Nigeria	Q	10.4	2.3	35.7	29.7	34.7	34.5	31.4	35.6	39.6
	V	1,829.0	1,008.0	21,678.0	19,337.0	22,215.0	22,308.0	21,258.0	20,275.0	18,012.0
North America:										
Jamaica	Q	12.7	10.4	12.2	10.6	12.8	12.5	12.2	12.6	16.4
	V	1,364.0	3,228.0	4,382.0	3,914.0	4,752.0	4,651.0	4,768.0	5,079.0	5,309.0
United States	Q	44.5	44.4	38.4	39.8	39.7	39.3	37.2	35.4	34.7
	V	4,730.0	14,823.0	13,614.0	14,338.0	15,141.0	15,994.0	14,840.0	14,774.0	14,990.0
South America:										
Brazil	Q	15.3	19.0	36.4	16.4	16.0	21.6	25.8	27.1	30.0
	V	2,282.0	11,594.0	20,491.0	8,822.0	8,795.0	12,350.0	15,861.0	14,970.0	16,817.0
Asia: Ceylon	Q	23.8	28.2	36.1	45.1	43.0	46.0	32.7	21.0	33.9
	V	4,964.0	7,940.0	15,392.0	17,020.0	16,213.0	20,238.0	12,283.0	7,345.0	11,890.0
Europe:										
Italy	Q	80.4	73.3	61.9	65.1	61.2	62.7	68.4	67.6	63.2
	V	9,842.0	23,174.0	21,705.0	23,497.0	22,973.0	24,674.0	26,320.0	27,944.0	30,790.0
Portugal	Q	38.1	26.7	27.9	25.7	21.3	20.4	29.3	23.8	18.8
	V	4,704.0	10,840.0	7,652.0	7,686.0	5,530.0	6,573.0	7,930.0	6,921.0	7,199.0
Spain	Q	56.2	18.9	18.9	17.9	11.1	9.5	11.9	14.6	17.5
	V	9,058.0	9,184.0	8,207.0	7,858.0	4,426.0	3,789.0	4,412.0	5,081.0	6,301.0
Greece	Q	16.9	22.0	16.2	17.1	17.5	15.4	16.4	15.6	17.5
	V	1,533.0	7,498.0	4,284.0	4,489.0	4,748.0	4,354.0	4,832.0	4,752.0	5,767.0
Germany (F.R.)	Q	61.8	95.9	12.5	14.4	14.5	17.7	17.3	18.6	20.2
	V	5,596.0	13,719.0	2,608.0	3,279.0	3,683.0	4,413.0	4,771.0	5,617.0	6,055.0

Table 15 (Continued)

FISH DRIED, SALTED OR SMOKEDIMPORTS BY MAJOR COUNTRIES: 1938, 1948 AND 1957 - 1963

		1938	1948	1957	1958	1959	1960	1961	1962	1963
U.S.S.R.	Q	---	---	69.3	55.1	52.7	28.1	8.6	16.6	20.3
	V	---	---	10,180.0	7,571.0	7,166.0	3,986.0	1,927.0	3,642.0	4,748.0
Total (11 countries)	Q	360.1	341.1	365.5	337.1	324.5	307.7	291.2	288.5	312.1
	V	45,902.0	103,008.0	130,193.0	117,811.0	115,642.0	123,330.0	119,202.0	116,400.0	127,878.0
Percent of World Total	Q		64.1	56.1	54.6	54.1	52.7	53.0	53.8	55.7
	V		65.5	62.6	60.7	60.7	60.5	60.3	60.0	61.6

Source: F. A. O.

Table 16

FISH, DRIED, SALTED OR SMOKEDNET TRADE BY CONTINENT: 1938, 1948 AND 1957 TO 1963

(Thousand Metric Tons)

	1938	1948	1957	1958	1959	1960	1961	1962	1963
Africa	- 17	- 3	- 49	- 46	- 47	- 56	- 48	- 58	- 64
North America	+ 38	+ 40	- 1	- 8	- 14	- 15	- 7	- 14	- 11
South America	- 22	- 23	- 40	- 21	- 20	- 26	- 32	- 31	- 36
Asia	- 54	- 15	- 35	- 32	- 34	- 43	- 20	- 19	- 29
Europe	+123	+ 73	+171	+143	+112	+ 99	+ 92	+117	+101
Oceania	- 1	- 2	- 2	- 5	- 4	- 4	- 4	- 4	- 4
U.S.S.R.	—	—	- 68	- 42	- 19	+ 15	+ 22	+ 23	+ 24

- Net Imports

+ Net Exports

Source: F. A. O.

Note: In 1938 and 1948 exports exceeded world imports since the survey did not include such large importers as the U.S.S.R.

Table 17

FRESH, CHILLED, OR FROZEN FISH PRODUCTS

EXPORTS AND NET TRADE POSITION BY CONTINENT: 1938, 1948 AND 1958 - 1963

(Thousand Metric Tons)

		1938	1948	1958	1959	1960	1961	1962	1963
Africa:	Total Exports	4.4	5.0	22.0	26.0	31.0	34.0	50.0	47.0
	Net Position	+ 2.3	+ 2.0	+ 3.0	+ 6.0	+ 4.0	- 13.0	- 17.0	- 24.0
North America:	Total Exports	57.8	103.0	154.0	146.0	154.0	147.0	164.0	166.0
	Net Position	- 7.5	- 25.0	-117.0	-163.0	-145.0	-137.0	-186.0	-172.0
South America:	Total Exports	---	2.0	18.0	31.0	21.0	24.0	27.0	30.0
	Net Position	- 1.0	+ 2.0	+ 18.0	+ 31.0	+ 20.0	+ 23.0	+ 26.0	+ 29.0
Asia:	Total Exports	33.0	23.0	165.0	203.0	225.0	236.0	289.0	301.0
	Net Position	+ 0.9	+ 4.0	+ 82.0	+117.0	+133.0	+144.0	+179.0	+174.0
Europe:	Total Exports	317.6	536.0	594.0	647.0	693.0	683.0	769.0	856.0
	Net Position	- 19.1	- 44.0	+ 38.0	+ 57.0	- 3.0	- 28.0	- 6.0	+ 8.0
Oceania:	Total Exports	2.2	3.0	3.0	4.0	4.0	3.0	3.0	3.0
	Net Position	- 2.0	- 1.0	- 8.0	- 7.0	- 12.0	- 13.0	- 12.0	- 14.0
Canada:	Exports	50.8	96.5	134.2	131.9	139.5	135.2	143.7	143.1
	Net Position	+ 42.2	+ 85.5	+124.8	+126.0	+134.0	+131.3	+136.7	+135.4
World Exports		415.0	672.0	956.0	1,057.0	1,128.0	1,127.0	1,302.0	1,403.0

Source: F. A. O.

Table 18

FISH, DRIED, SALTED OR SMOKED:EUROPEAN PRODUCTION AND CONSUMPTION

(Thousand Metric Tons - Product Weight)

	1938	1948	1957	1958	1959	1960	1961	1962	1963
Europe :									
Production	707	699	737	775	718	710	755	724	N.A.
Net Exports	123	73	171	143	112	99	92	117	101
Consumption	584	418	566	632	606	611	663	607	N.A.
Italy, Spain, Portugal, Greece:									
Production	29 ⁽¹⁾	32 ⁽¹⁾	150	143	132	149	185	204	N.A.
Net Imports	179	136	110	114	100	88	86	83	85
Consumption	208	168	260	257	232	237	271	287	N.A.
Europe Other :									
Production	678	667	587	632	586	561	570	520	N.A.
Net Exports	302	209	271	257	222	187	178	200	186
Consumption	376	458	316	375	364	374	392	320	N.A.

Source: F. A. O.

(1) Production of Spain and Greece excluded.

Table 19

FISH, DRIED, SALTED OR SMOKEDWORLD TRADE AND CANADIAN EXPORTS: 1938, 1948 AND 1958 TO 1963

(Thousand Metric Tons)

		1938	1948	1958	1959	1960	1961	1962	1963
Fish, Dried, Salted or Smoked -	Total Exports	776	612	606	574	554	552	549	541
	Canadian Exports	111	126	66	62	60	56	52	62
	Percent	14	21	11	11	11	10	9	11
Stockfish (cod and similar species) -	Total Exports ⁽¹⁾	27	12	43	47	46	43	43	49
	Canadian Exports	-	-	-	-	-	-	-	-
	Percent	-	-	-	-	-	-	-	-
Cod, Hakes, Haddocks etc. -	Total Exports ⁽¹⁾	233	173	208	184	187	190	192	195
	Canadian Exports	81	82	50	49	49	45	40	48
	Percent	35	47	24	27	26	24	21	25
Other, Dried, Salted, or Smoked -	Total Exports ⁽¹⁾	486	345	299	287	264	255	249	250
	Canadian Exports	30	44	16	13	11	11	12	14
	Percent	6	13	5	5	4	4	5	6

Source: F. A. O.

(1) Exports main exporting countries, and do not add up to total.

Table 20

CODS, HAKES & HADDOCKS ETC: SALTED & DRIEDWORLD EXPORTS AND MAJOR EXPORTERS: 1958 - 1963

(Q - Thousand Metric Tons, V - Thousand of \$U.S.)

		1958	1959	1960	1961	1962	1963
Grand Total Exports	Q	208.0	184.0	187.0	190.0	192.0	195.0
	V	70,151.0	63,793.0	69,948.0	68,108.0	71,039.0	75,364.0
Canada	Q	50.1	48.5	48.8	44.8	40.1	48.2
	V	18,707.0	18,486.0	19,298.0	16,658.0	16,441.0	19,048.0
Faroe Islands	Q	26.4	21.1	23.4	23.9	32.5	34.8
	V	7,978.0	6,129.0	7,307.0	7,272.0	10,329.0	12,291.0
France	Q	25.9	24.4	24.4	23.6	24.2	20.4
	V	8,396.0	8,155.0	9,390.0	8,552.0	8,675.0	8,236.0
Germany	Q	9.2	7.7	9.8	17.5	13.4	14.4
	V	2,362.0	2,311.0	2,706.0	4,991.0	3,737.0	3,984.0
Iceland	Q	32.9	27.5	30.5	38.1	34.1	27.6
	V	9,317.0	7,769.0	8,446.0	11,001.0	10,288.0	8,749.0
Norway	Q	47.5	39.2	35.1	26.3	34.3	33.8
	V	18,403.0	16,061.0	17,588.0	14,040.0	16,251.0	17,003.0

Source: F. A. O.

Table 21

NUMBER OF PEOPLE ENGAGED IN PRIMARY FISHING OPERATIONS:
ATLANTIC COAST PROVINCES; INSHORE AND OFFSHORE; 1956-1963

		1956	1957	1958	1959	1960	1961	1962	1963
Newfoundland	- Inshore (3)	14,348	15,769	17,653	17,751	17,697	18,125	19,205	20,631
	Offshore (2)	608	578	557	555	594	631	612	776
	Total	14,956	16,347	18,210	18,306	18,291	18,756	19,817	21,407
Nova Scotia	- Inshore (3)			n.a.	11,053	10,753	10,525	10,278	10,676
	Offshore (2)			n.a.	1,959	2,027	2,053	2,433	2,791
	Total	(1)	(1)	13,747	13,012	12,780	12,578	12,711	13,467
New Brunswick	- Inshore (3)			n.a.	5,902	5,542	5,535	5,024	4,676
	Offshore (2)			n.a.	480	633	691	1,149	1,300
	Total	(1)	(1)	6,220	6,382	6,175	6,226	6,173	5,976
Prince Edward Island	- Inshore (3)			n.a.	3,165	3,152	3,342	3,267	3,254
	Offshore (2)			n.a.	95	122	122	100	118
	Total	(1)	(1)	3,209	2,260	3,274	3,464	3,367	3,372
Quebec	- Inshore (3)			n.a.	5,168	4,696	3,472	3,406	(3,294)
	Offshore (2)			n.a.	219	293	299	380	(380)
	Total	5,290	5,578	6,172	5,387	4,989	3,771	3,786	3,674

Source: Fisheries Statistics of Canada-Annual.

(1) Comparable data not available.

(2) Men Fishing in boats under 25 gross tons
 Vessels: 25 to 50 gross tons - 4 men
 " 51 to 100 " " - 7 "
 " 101 to 150 " " - 15 "
 " over 150 " " - 18 "

(3) By subtraction.

Table 22

NUMBER OF PEOPLE ENGAGED IN PRIMARY FISHING OPERATIONS:
CANADIAN ATLANTIC COAST; (1) INSHORE AND OFFSHORE; 1958-1963

		1956	1957	1958	1959	1960	1961	1962	1963
Total Atlantic Region and Quebec									
	Inshore			n.a.	43,039	41,840	40,999	41,180	42,531
	Offshore			n.a.	3,308	3,669	3,796	4,674	5,365
	Total			47,558	46,347	45,509	44,795	45,854	47,896
P.E.I., N.S., N.B. -									
	Inshore			n.a.	20,120	19,447	19,402	18,569	18,606
	Offshore			n.a.	2,534	2,782	2,866	3,682	4,209
	Total			23,176	22,654	22,229	22,268	22,251	22,815

(1) Summarized from Table 21.

Table 23

T:

TOTAL LABOUR FORCE, TOTAL EMPLOYED, TOTAL UNEMPLOYED, EMPLOYMENT IN FISHING: ATLANTIC REGION AND QUEBEC;

1956-1963

(Thousands)

		1956	1957	1958	1959	1960	1961	1962	1963
Total Labour Force:	Atlantic Region	521	542	544	553	567	592	600	601
	Nfld.	107	111	111	115	117	122	126	<u>135</u>
	P.E.I., N.S., and N.B.	414	431	433	438	450	470	474	<u>466</u>
	Quebec	1,615	1,675	1,730	1,752	1,796	1,812	1,842	1,892
Labour Force - With Jobs	Atlantic Region	491	499	476	493	507	526	536	544
	Nfld.	100	101	91	94	96	98	104	<u>116</u>
	P.E.I., N.S., and N.B.	391	398	385	399	411	428	432	<u>428</u>
	Quebec	1,535	1,574	1,577	1,613	1,632	1,644	1,703	1,752
Unemployed:	Atlantic Region	30	43	68	60	60	66	65	57
	Nfld.	7	10	20	21	21	24	22	<u>19</u>
	P.E.I., N.S., and N.B.	23	33	48	39	39	42	43	<u>38</u>
	Quebec	80	101	153	138	164	168	138	141
Employment in Fishing:	Atlantic Region	*	*						
	Nfld.	15.0	16.3	41.4	41.0	40.6	41.1	42.1	44.2
	P.E.I., N.S., and N.B.	-	-	18.2	18.3	18.3	18.8	19.8	<u>21.4</u>
	Quebec	5.3	5.6	23.2	22.7	22.3	22.3	22.3	<u>22.8</u>
Employment in Fishing as Percent of Total	Atlantic Region	-	-	7.6	7.4	7.2	6.9	7.0	7.4
	Nfld.	14.0	14.7	16.4	15.9	15.6	15.4	15.7	<u>15.9</u>
	P.E.I., N.S., and N.B.	-*	-*	5.4	5.2	5.0	4.7	4.7	<u>4.9</u>
	Quebec	3.3	3.3	3.6	3.1	2.8	2.1	2.1	<u>2.0</u>

Source: Fisheries Statistics of Canada, Dominion Bureau of Statistics.

* Comparable data not available.

Table 24

TOTAL LANDINGS, NUMBER OF FISHERMEN, LANDINGS PER FISHERMAN: NEWFOUNDLAND, MARITIMEPROVINCES AND QUEBEC; 1958-1963

		1958	1959	1960	1961	1962	1963	Average 1958-60	Average 1961-63	Percentage Change
Landings: ('000 lbs.)	Atlantic Coast	1,217,974	1,330,615	1,133,522	1,205,324	1,319,641	1,385,396	1,294,037	1,303,454	+ 0.7
	Newfoundland	446,139	534,789	546,533	484,709	527,716	560,791	509,154	524,405	+ 3.0
	Maritimes	662,969	688,498	695,730	616,826	660,965	694,847	682,399	657,546	- 3.6
	Quebec	108,866	107,328	91,259	103,789	130,960	129,758	102,484	121,502	+18.6
Number of Fishermen:	Atlantic Coast	47,558	46,347	45,509	44,795	45,854	47,896	46,471	46,182	- .6
	Newfoundland	18,210	18,306	18,291	18,758	19,817	21,407	18,269	19,993	+ 9.4
	Maritimes	23,176	22,654	22,229	22,268	22,251	22,815	22,686	22,445	- 1.1
	Quebec	6,172	5,387	4,989	3,771	3,786	3,674	5,516	3,744	-32.1
Landings Per Fisherman: (lb)	Atlantic Coast	25,610	28,709	29,302	26,908	28,779	28,925	27,874	28,204	+ 1.3
	Newfoundland	24,499	29,214	29,880	25,843	26,629	26,197	27,864	26,223	- 5.9
	Maritimes	28,606	30,392	31,298	27,700	29,705	30,456	30,099	29,287	- 2.7
	Quebec	17,639	19,924	18,292	27,523	34,591	35,317	18,618	32,380	+73.9

Source: Landings - Fisheries Statistics of Canada.

Table 25

NEWFOUNDLAND, TOTAL LANDINGS, NUMBER OF FISHERMEN, LANDINGS PER FISHERMAN;

1956 - 1963

		1956	1957	1958	1959	1960	1961	1962	1963	Average 1956- 1959	Average 1960- 1963	Per- centage Change
Landings of All Species:(1) (000 lb)	Total	621,585	575,825	464,027	562,219	573,775	503,079	549,341	594,961	555,914	555,289	- 0.1%
	Inshore	498,485	474,425	367,327	469,619	469,275	380,779	414,341	448,453	452,464	428,212	- 5.4%
	Offshore	123,100	101,400	96,700	92,600	104,500	122,300	135,000	146,508	103,450	127,077	+ 22.8%
Fishermen:	Total	14,956	16,347	18,210	18,306	18,291	18,756	19,817	21,407	16,955	19,568	+ 15.4%
	Inshore	14,348	15,769	17,653	17,751	17,697	18,125	19,205	20,631	16,380	18,915	+ 15.5%
	Offshore	608	578	557	555	594	631	612	776	575	653	+ 13.6%
Landings Per Fisherman:	All	41,561	35,225	25,482	30,712	31,369	26,822	27,721	27,793	33,245	28,426	- 14.5%
	Inshore	34,742	30,086	20,808	26,456	26,517	21,008	21,574	21,737	28,023	22,709	- 19.0%
	Offshore	202,467	175,433	173,608	166,846	175,925	193,819	220,558	188,799	179,588	194,775	+ 8.5%

Source: Fisheries Statistics of Canada.

(1) Including livers.

Table 26

VALUE OF FISH LANDED, LANDED VALUE PER FISHERMAN:NEWFOUNDLAND, MARITIME PROVINCES, QUEBEC;1958-1963

		1958	1959	1960	1961	1962	1963
Value of Landings: (\$ 000)	Atlantic Coast	51,153	58,435	59,763	59,005	68,373	75,791
	Newfoundland	11,312	14,529	15,856	14,922	17,454	20,429
	P.E.I., N.S., N.B.,	36,062	40,033	39,940	39,855	45,749	49,731
	Quebec	3,779	3,873	3,967	4,228	5,170	5,631
Value Per Fisherman:	Atlantic Coast	1,076	1,261	1,313	1,317	1,491	1,582
	Newfoundland	621	794	867	796	881	954
	P.E.I., N.S., N.B.,	1,556	1,767	1,798	1,790	2,056	2,180
	Quebec	612	719	795	1,121	1,366	1,533

Source: Fisheries Statistics of Canada.

Table 27

NEWFOUNDLAND: VALUE OF FISH LANDED, INSHORE AND OFFSHORE;1957 - 1963

		1957	1958	1959	1960	1961	1962	1963
Value of Fish Landed: (\$ 000)	Inshore Fisherman ⁽¹⁾	10,926	8,600	11,949	12,904	11,311	13,362	15,725
	Offshore Fisherman ⁽²⁾	2,746	2,712	2,580	2,952	3,611	4,092	4,704
	Total	13,672	11,312	14,529	15,856	14,922	17,454	20,429
Value Landed Per Fisherman	Inshore Fisherman	692	487	673	729	624	696	762
	Offshore Fisherman	4,750	4,870	4,649	4,970	5,723	6,686	6,062
	All Fishermen	836	621	794	867	796	881	954

(1) Value of Inshore Landings of Cod: Source - Department of Fisheries.
 Value of Molluscs and Crustacians: Source - Fisheries Statistics of Canada.
 Value of Viscera: Source - Fisheries Statistics of Canada.
 Value of Pelagic and Estuarial Fish: Source - Fisheries Statistics of Canada.

(2) By subtraction.

Table 28

NEWFOUNDLAND: NUMBER OF INSHORE COD FISHERMEN, NUMBER SALTING, NUMBER SELLING FRESH

1956 - 1963

Year	No. of Inshore Fishermen	No. of Inshore Cod Fishermen	Other Inshore Fishermen	Inshore		Cod		Fishermen		Percentage of Cod Fishermen		
				No. Salting	No. Selling Fresh	No. Selling Only Fresh	No. Selling Fresh & Salting	No. Only Salting	Selling Only Fresh	Fresh & Salting	Salting Only	
	A	B	C	D	E	F	G	H				
1963	20,631	17,653	2,978	14,893	9,031	2,760	6,271	8,622	15.6	35.5	48.9	
1962	19,205	16,523	2,682	14,255	8,371	2,268	6,103	8,152	13.7	36.9	49.4	
1961	17,984	15,412	2,572	13,940	5,999	1,472	4,527	9,413	9.5	29.4	61.0	
1960	17,529	15,453	2,076	13,959	6,464	1,494	4,970	8,989	9.7	32.2	58.1	
1959	17,598	15,647	1,951	13,163	7,639	2,484	5,155	8,008	15.9	32.9	51.2	
1958	17,578	15,611	1,967	13,266	6,463	2,345	4,118	9,148	15.0	26.4	58.6	
1957	15,724	13,808	1,916	12,216	4,693	1,592	3,101	9,115	11.5	22.5	66.0	
1956	14,309	12,160	2,149	10,418	4,731	1,742	2,989	7,429	14.3	24.6	61.1	

Source: Columns A, B, C, D, E: Department of Fisheries.

Column F = B-D.

Column G = E-F.

Column H = D-G.

Table 29

NEWFOUNDLAND: AVERAGE LANDINGS PER INSHORE COD FISHERMAN; SALTING AND SELLING FRESH

(Pounds)

1957-1962

Year	Fisherman Salting Cod	Fisherman Selling Fresh	Per Cent Difference
1962	18,932	25,909	+ 36.9
1961	15,555	33,106	+112.8
1960	21,989	34,165	+ 55.4
1959	23,518	28,997	+ 23.3
1958	14,977	26,839	+ 79.2
1957	25,009	37,444	+ 49.7
Av. 1957 - 1962	19,997	31,077	+ 55.4

Source: Based on data from Department of Fisheries.

Table 30

PERCENTAGE BREAKDOWN OF SALT FISH EXPORTS BY GRADES

NEWFOUNDLAND 1954 - 1964

Year	Choice and Prime	Madeira	Lower Grades
1954	4.3	49.2	46.5
1955	10.4	51.4	38.2
1957	4.3	53.4	42.3
1958	7.4	50.7	41.9
1959	11.1	47.0	41.9
1960	16.1	45.2	38.7
1961	16.5	40.9	42.6
1962	13.3	41.9	44.8
1963	20.2	46.5	33.3
1964	17.5	41.1	31.4

Note : Excludes shipments to Canadian mainland.

Source: Inspection Branch, Department of Fisheries, St. John's.

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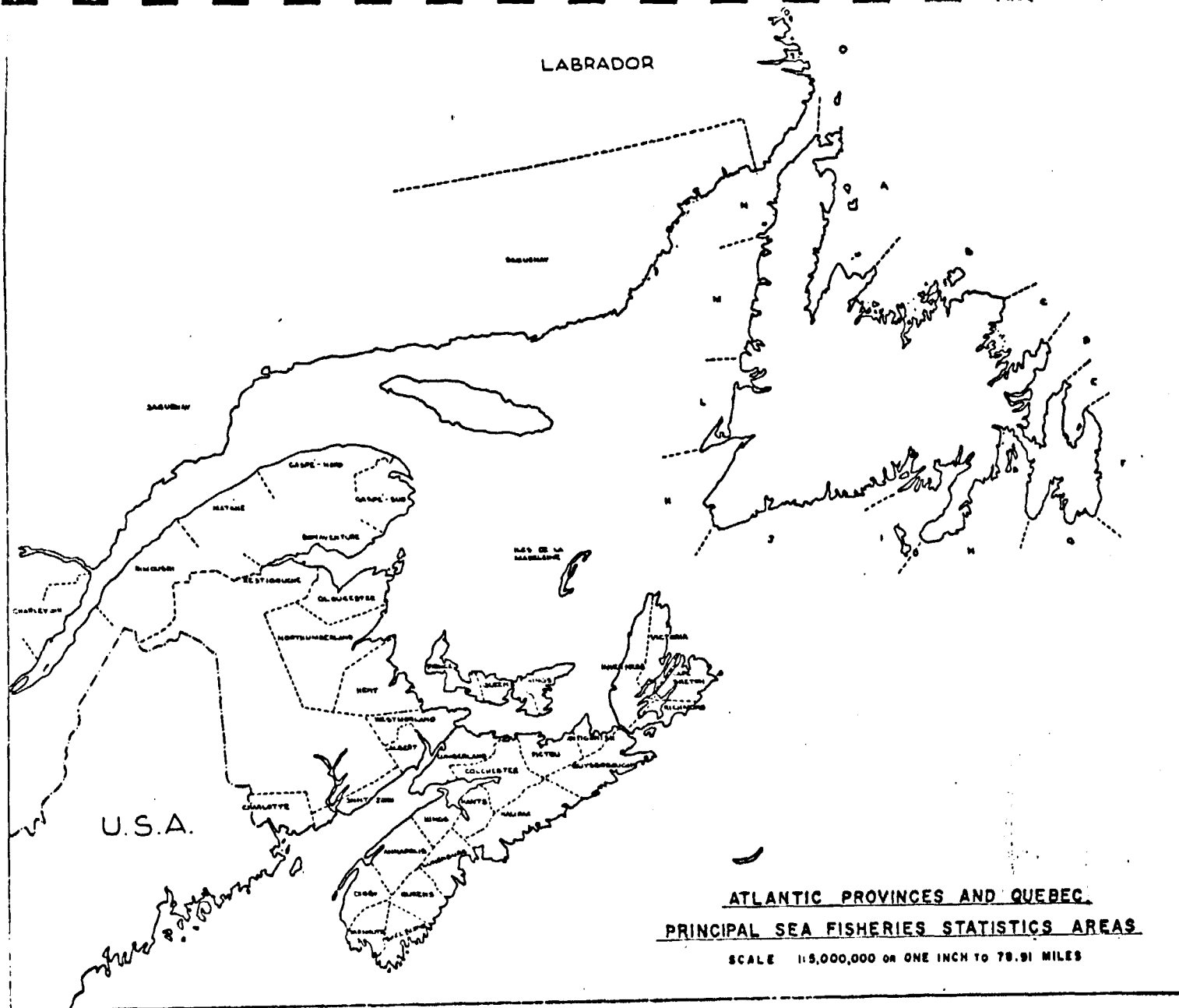
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