1950

NEW ZEALAND

MARINE DEPARTMENT

ANNUAL REPORT FOR THE YEAR 1949–50

Presented to both Houses of the General Assembly by Command of His Excellency

Marine Department, Wellington, 30th June, 1950.

YOUR EXCELLENCY,—

I do myself the honour to transmit for Your Excellency's information the report of the Marine Department for the financial year ended the 31st March last.

I have, &c.,

W. S. GOOSMAN,

Minister of Marine.

His Excellency the Governor-General of the Dominion of New Zealand.

REPORT

The SECRETARY, MARINE DEPARTMENT, to the Hon. the MINISTER OF MARINE.

SIR,— Marine Department, Wellington, 29th June, 1950.

I have the honour to submit the report of the Marine Department for the year ended 31st March, 1950.

During the year the main Harbour Boards have endeavoured to improve their financial position to enable them to meet operating expenses in full, and to carry out necessary maintenance work which for various reasons had to be deferred during the war period. Owing to Price Control Regulations there had been difficulty in obtaining approval to increased revenue sufficient to cover these factors, but towards the end of last session price control of Harbour Board by-law charges was relaxed. Since that date many Boards have taken the opportunity to increase their charges. The Department's attitude on Boards' applications for increased revenue by way of by-law charges is that, in the main, Harbour Boards should be able to conduct their own business with as little departmental interference as possible, and then only to ensure that the proposals are not *ultra vires* and are equitable as between those sections of the people which pay. The necessity for improvements to port facilities to assist in the quick turn-round of vessels has been realized, and many of the Harbour Boards have proposals in hand some in the embryonic stage, others actually in progress.

Good progress has been made with the consolidation of the Shipping and Seamen Act, 1908 (with amendments to date). At the end of the year this measure was in final draft form. In addition to consolidating the present Act and amendments, it also includes the measures necessary to bring into effect the resolutions of the International Convention for the Safety of Life at Sea, held in London in 1948. The provisions of this Convention apply to the ships of all signatory nations as from 1st January, 1951.

I commented last year on the substantial progress made by way of the fitting of navigational aids on our coastal vessels. It is pleasing to note that the provisions of wireless telephones has spread to still smaller vessels, in that many of our small fishing craft are so fitted and such installation, apart from its safety aspect, has been a boon to members of the crew and to the companies or owners concerned.

The presence in New Zealand waters of the survey vessel H.M.S. "Lachlan" will be pleasing to all mariners. A report on this vessel's activities is a matter for the New Zealand Naval Board, but opportunity is taken here to place on record the Department's appreciation of the co-operation shown by the Commander of the vessel, Commander Sharpey-Schafer, R.N. In addition to the charting work, the complement of the vessel has carried out much oceanographic work, and a great deal of research work for our fisheries research officers.

GOVERNMENT VESSEL "MATAI"

Since August, 1949, this vessel has been under charter to the Anchor Shipping and Foundry Co., Ltd., and has given good service on the Nelson–Wellington ferry run. The "Matai" was not required for any cable repair work during the past year.

BLUFF STEWART ISLAND FERRY SERVICE

This service has been carried out efficiently during the past year. In addition to ferry work, our vessel has serviced Puysegur Point Lighthouse, conveyed mutton-birders to Cape Islands, and carried out two trips to Milford Hostel with stores.

PROSECUTIONS

During the year there were 78 prosecutions issued by the Department. Seventy-five of these were for breaches of the Fisheries Act, and 3 for breaches of the Shipping and Seamen Act.

HARBOURS

The control of Picton and Westport Harbours is still the responsibility of the Marine Department. At Dargaville, owing to the lack of shipping, the port was closed, and although the local Borough Council desired the entry of one vessel with coal during the past year it was considered that the cost of reinstalling the buoys marking the channel was not warranted.

At Picton the servicing of the Brothers Lighthouse and maintenance of automatic lights in the Sounds area has been carried out by the Harbourmaster and his staff. During the year ended 31st March, 1950, 301 coastal vessels and 4 intercolonial vessels visited the port.

ADMIRALTY CHARTS

The Department acts as agent for the sale of Admiralty charts and publications and maintains a stock at Head Office and at principal mercantile marine offices in the Dominion. The stock includes all charts of the Dominion, and many other parts of the world to which ships trading to or visiting the Dominion may be diverted.

A very useful service—that of advising masters of vessels regarding the folios of charts required for a particular voyage—has been made use of most frequently, and more particularly by masters of tankers voyaging to Borneo and the Shatt al Arab ports.

The correction of charts necessitated by the establishment of additional navigational aids, the clearing of minefields, and the discovery of rocks, shoals, &c., is a never-ending task, and 13,000 hand corrections were made during the year to our saleable stock.

NEW CHARTS

This year has been extremely profitable as regards improvements to Folios 71 and 72, which includes all the New Zealand charts.

Chart No. 2553, Sheet XI, Foveaux Strait and Stewart Island, has had amendments to topography and soundings, slip plate to eastward added, and new true and Magnetic compass roses. The slip plate to the eastward has eliminated a very grave disadvantage which has always existed at Waipapa Point, that of changing from one chart to another at this vital part of the Bluff–Dunedin voyage. It is now possible to use the one chart and thus avoid the replotting of the position off Waipapa Point.

Charts Nos. 3633 and 3634, North and South Islands respectively, were published by the Admiralty on 15th February, 1950, and will fill a long-felt want. The New Zealand General Chart No. 1212 is too small a scale to be of any great use other than plotting long courses and distances, and the two additions to the New Zealand folios will be greatly appreciated.

NOTICES TO MARINERS

Information relative to changes in navigational aids and to the discovery of obstructions, wreckage, or other dangers to navigation, and information of general interest to mariners, has been published in the form of "Notices to Mariners." During the year 59 such notices were issued. Many notices of an urgent navigational nature must be disseminated by radio, and the broadcasting and coast radio stations have been used for this purpose on many occasions during the year.

EXAMINATIONS OF MASTERS AND MATES

Examinations have been held in Auckland and Wellington on statutory days and on other occasions when circumstances have justified special examinations. It is the practice to grant special facilities to officers visiting New Zealand for the purpose of undertaking the examinations while their vessels are in port. The examinations have been conducted in a satisfactory manner, and in the case of foreign-going ships in accordance with the requirements of the Imperial Ministry of Transport. The number of examinations, 130, is a decrease of 32 on the figures for last year.

The passes and failures are as follows:

	Per Cent.
Foreign-going Certificates—	
Full pass	65
Partial pass	26
Failure	9
Home-trade Certificates	
Full pass	73
Partial pass	27

The written part of the examinations for both foreign going and home trade, in so far as the navigation problems are concerned, will be altered considerably within the next two or three years as a result of the radical changes which are to be introduced into the "Nautical Almanac."

EXAMINATIONS IN SIGHT TESTS

Examinations in sight tests during the year totalled 113, an increase of 4 on last year, of whom 107 passed and 6 failed.

"NEW ZEALAND NAUTICAL ALMANAC AND TIDE TABLES"

This publication for 1950 (forty-eighth edition) was published in ample time for circulation before the beginning of the year. It is very desirable that articles of interest to mariners should be included in the "Almanac," and in this year's edition a chart of New Zealand showing the magnetic declination or variation of the compass for epoch 1st January, 1950, is included.

Every endeavour is made to keep the port information up to date by co-operation with the various Harbour Boards and to maintain the accuracy of that information by the issue of "Notices to Mariners." The "Almanac" will have to be redesigned next year to bring it into line with the new set-up of the abridged "Admiralty Almanac." Information has been received that the "Admiralty Almanac" will be completely redesigned as from the year 1952. The new form will eliminate entirely the quantities R and E, which were introduced in 1925, and the quantities G.H.A. of the sun and G.H.A. of Aries are to be substituted. Although specimen sheets of the abridged "Admiralty Almanac" appear in "Admiralty Notices to Mariners No. 7 Weekly Edition of 1949," the form the New Zealand "Nautical Almanac and Tide Tables" is to take will require much study. It can be stated that the new "Almanac" will differ radically from the present form both in principle and arrangement. Every endeavour will be made to publish the 1952 "Almanac" as early as possible in 1951 to enable users to become accustomed to the new elements introduced and to the new form of setting up.

RADIO REGULATIONS

These regulations are now being revised and should be completed in the near future.

COMPASSES

The regulations for ships' compasses have been carefully administered and compasses have been maintained in a good state of efficiency.

SEARCH AND RESCUE ORGANIZATION

This organization continues to render valuable service to small ships in distress, and steps have been taken to improve its efficiency by setting up a committee representative of all bodies interested in land and sea rescues.

SMALL CRAFT REGULATIONS

Full agreement was not possible between the Department and yacht clubs regarding the proposed Small Craft Regulations. The majority of yacht clubs have been very co-operative, and it is hoped that the safety measures desired by the Department will be incorporated in Yacht Clubs' rules.

NAVIGATION SCHOOLS

The tuition at both schools has been of a very high standard, and the Directors are making every endeavour to improve the academic side of the seafarer's education. It should be appreciated that our schools are mainly for the purpose of teaching navigation, and must not be confused with residential nautical schools overseas, where young men are trained in all phases of the duties of a seaman. The number of candidates attending the schools during the year was made up as follows:—

	Wellington.	Auckland.
Extra Master	1	Nil
Master, F.G.	7	5
First Mate	6	15
Second Mate	13	17
Vol. Exam. Comp. Dev.	3	1
Master, H.T.	4	4

	Wellington.	Auckland.
First Mate, H.T.	6	8
Yacht Master	5	6
Master, 25-ton	1	2
Master, Fishing-vessel	2	1
Master, River Limits	1	5
	49	64

Total, 113

The percentage of passes was very high, and this is due entirely to the painstaking work of the Directors. The radical alteration in the set-up of the "Admiralty Abridged Almanac" and the introduction of G.H.A. of the sun and G.H.A. of Aries will throw additional responsibilities on to the Directors.

LIGHTHOUSES, RADIO BEACONS, ETC.

The Department's programme regarding new installations and the improvement of existing navigational aids has been pursued as far as practicable.

During the year the following work was carried out: -

New Installations Completed and Commissioned:—

Electric Automatic—

Motuara Island, at entrance to Queen Charlotte Sound.
Gibson Point, between Lyttelton and Kaikoura.
Slope Point, at Eastern entrance to Foveaux Strait.
Whangaroa Harbour Entrance.
Tauranga, Mount Maunganui.

Gas Automatic: Whitianga, Mercury Bay.

Electric Buoy Light: Awanui, North Auckland.

In addition to above, four small battery electric flashing lights have been installed at Lake Taupo for use of the fishing-fleet.

NEW INSTALLATIONS IN PROGRESS

Electric Automatic (five in number): Cape Kidnappers, Slipper Island, Cape Farewell, Ohau Point, and Bushy Point.

All equipment is on order, and completion is anticipated this year.

Preliminary Work has been commenced for new automatic lights at Durham Point (Chatham Island), Motuketekete Island (Hauraki Gulf), Putiki Point (Waiheke Island), Mangonui Heads (North Auckland).

Electrification of automatic beacons at North Cape and Channel Island is now completed, and light on Chickens re-established.

Portland Island.—Preliminary work has been commenced for electrification of light and installation of modern radio beacon.

Cape Egmont Light.—Electrification and connection to mains supply should be completed in three months.

Moeraki Light.—Conversion from fixed to flashing character should be completed in three months.

Baring Head Light is now modernized and connected to main electric supply.

Radio Beacons.—The equipment for standard radio beacons at Tiri Tiri, East Cape, Godley Head, Taiaroa Head, and Dog Island is on order.

ENGAGEMENT OF SEAMEN

This service has been maintained. A record of seamen applying for work is kept for the purpose of filling vacancies.

SICK AND INJURED SEAMEN

The total amount paid by shipowners to sick and injured seamen, under the provisions of the Shipping and Seamen Act, 1908, and Amendments, was £19,803 0s. 8d., as against £19,529 5s. 7d. for the previous year, an increase of £273 15s. 1d.

REGISTRATION OF SHIPS

On the 31st December, 1949, there were on the Register of Vessels in the Dominion 44 sailing-vessels of 3,525 net tons register, 113 steamers of 61,282 net tons register, and 325 motor-vessels of 40,797 net tons register, as compared with 43 sailing-vessels of 3,515 net tons register, 122 steamers of 64,052 net tons register, and 308 motor-vessels of 32,603 net tons register at the end of the previous year.

The number of seamen employed on board was 2,913, as compared with 2,637 for the year 1948.

WESTPORT HARBOUR

In preparing annual reports on Westport Harbour it is customary to reiterate that good trading results are dependent mainly upon a satisfactory working depth on the bar. The geographical situation of the harbour, placed as it is at the mouth of the Buller River, renders it subject to several factors such as varying river flow, sets, sea and wind conditions, and ocean current, all of which, singly or in combination, can have a beneficial or a detrimental effect on the working depth at the entrance.

As laden vessels leave the port at or near time of high water it is the high-water depth on the bar which governs the effective working of the port. During the year now under review—*i.e.*, 1st April, 1949, to 31st March, 1950—the average for the year of the "month by month" mean of daily high-water depths was 21 ft. 5 in.

Although, generally speaking, the working depth was not as good as the 22 ft. 8 in. average for the previous year, it was better than that recorded for the previous six years, when trade figures were better. Moreover, the bar depth was fairly constant over the whole year, there being no particularly long spells of either very good or very bad bar depth.

Some restricted loadings were necessary during the first ten days of October owing to bar condition, yet this had no obvious detrimental effect on the coal shipments. The coastal vessels made more trips with lighter loads, and October was one of the best months of the year from point of view of number of ships and tonnage exported.

The number of days on which depth obtained on the bar at high water during the years stated (ended 31st March) are as set out in the following table:—

Depth.	1931.	1939.	1942.	1944.	1945.	1946.	1947.	1948.	1949.	1950.
14′–16′ ..	..	..	..	1	..	2	..	12	..	..
16′–18′ ..	25	2	1	39	23	35	..	16	3	5
18′–20′ ..	132	88	33	96	69	124	35	52	31	55
20′–22′ ..	165	149	181	150	142	117	151	154	97	194
22′–24′ ..	43	115	143	75	87	62	126	116	150	98
24′–26′ ..	..	11	7	5	43	24	51	13	77	10
26′–28′ ..	..	..	..	..	1	1	2	3	6	3
Over 28′ ..	..	..	..	..	..	..	..	..	1	..
Mean for year ..	20′ 2″	21′ 3″	21′ 9″	20′ 8″	21′ 4″	20′ 8″	22′ 2″	21′ 2″	22′ 8″	21′ 5″

In respect to the same years this next table sets down the coal shipments for such years in relation to the mean of high water bar depths for those years :—

Year.	Mean of High-water Depths on Bar.	Total Coal Shipments (Tons).
	Ft. in.	
1931	20 2	513,500
1939	21 3	426,400
1942	21 9	487,500
1944	20 8	401,300
1945	21 4	402,000
1946	20 8	385,300
1947	22 2	384,800
1948	21 2	382,400
1949	22 8	326,400
1950	21 5	308,784

The continued decline in coal shipments since 1942 is to be noted. In my report for last year I commented upon this, and the even more pronounced fall in shipments this past year would suggest the need for further comment. In the first place there was some loss as result of a complete stoppage of output from the major mine in the district, the Stockton State Mine, which stoppage, due to an industrial dispute, extended for just on a month, but even then this was not a major cause of the decline in shipments.

Developmental work at the mines which was retarded during the war years is in progress. Large and modern machines are being installed at the open-cast mines, and an aerial ropeway is being constructed to convey the coal from the high elevation of the workings to the low coastal level, and when this work is completed, together with the opening up of new coal areas, increased output should reflect very favourably in substantial recovery to the trade of the port.

Three new colliers—" Kaitangata," " Kaitawa," and " Konui " have been added to the Union Steam Ship Co.'s collier fleet, together with the Anchor Shipping Co.'s " Puriri," in replacement of several vessels which had served the trade for many years, and, due to their more efficient ability, such new vessels should well cope with the shipments demands which improved mines output will create, although delays in despatch and turnround of colliers at outer ports and *en route* can continue at times to interfere with collier schedules, with consequent disruption to efficient flow of coal from the mines.

Coal railed to the east coast of the South Island for the year totalled 115,868 tons, as compared with about 129,000 tons last year.

One overseas shipment of bunker and cargo coal was made during the year when s.s. " Kaikorai," on sale to China, loaded 2,201 tons cargo coal and 1,250 tons bunkers. Timber shipments were 233,530 superficial feet, compared with 1,092,438 superficial feet for the previous year. This reduction was brought about by increased local demand and quantity railed to the east coast.

During the year 171 (208) vessels, aggregating 148,642 (152,789) tons net register, departed from the port, the figures in parentheses being those corresponding for the previous year. " In and Out " totals for the year were 344 (418) vessels, aggregating 296,666 (307,340) tons net register.

The bar suction dredger " Eileen Ward " worked consistently throughout the year, removing 419,080 cubic yards from the bar, and 106,580 cubic yards from the fairway and berthage area.

Having completed necessary maintenance dredging in the floating basin, the ladder-dredger " Maui " commenced operations in the berthage area, where shoaling had taken place during the absence of the vessel at Castlecliff. This dredger lifted and dumped at sea 15,300 cubic yards of spoil from the floating basin and 93,900 cubic yards from the berthage area.

In the operation of this port two factors must be kept in view :—

(*a*) The maintenance of the port in such condition as to ensure the availability of coal to North Island industries ; and

(*b*) Development and improvement for the future.

In relation to the former, the port is well equipped, and all existing harbour installations, plant, and flotilla are maintained in good order and condition.

With regard to development and improvement, much preparatory work has been done in this direction. Having regard to the probability that large harbour construction works would be undertaken, a new workshops building was designed and should be in the course of erection during the present year, while several new items of workshops machinery have been obtained. Survey work in connection with tidal compartment dredging has been completed.

Once again I must express appreciation of the services voluntarily rendered to the Department by the Harbour Advisory Committee, the members of which are representative of all interests locally concerned in the successful functioning of the port. The Committee continues to meet regularly and consider matters for the improvement of the port.

EXAMINATION OF MARINE ENGINEERS

During the year 375 were examined for Marine Engineer's Certificates of Competency at the various centres throughout the Dominion. Of these 162 were examined for First- and Second-class Certificates of Imperial Validity ; 113 were examined for Third-class Marine Certificates, and 31 were examined for First- and Second-class Coastal Motor Certificates of New Zealand validity.

Candidates sitting for First-class Imperial Validity Certificates total 62, of which 25 passed for certificates, 12 passed part "A," 7 partly passed "A" or "B" sections, and 18 failed.

Candidates sitting for Second-class Imperial Validity Certificates total 100, of which 21 passed for certificates, 32 passed part "A," 17 partly passed "A" or "B" sections, and 30 failed.

Passes for First-class Imperial Validity Certificates issued by the Department were subdivided as follows : 2 Combined Steam and Motor, 9 Steam, 2 Steam Endorsement, 6 Motor, and 6 Motor Endorsement.

Passes for Second-class Imperial Validity Certificates issued by the Department were subdivided as follows : 14 Steam and 7 Motor ; totalling 46 certificates issued, as shown in following table :-

Class.	Combined Steam and Motor.	Steam.	Steam Endorsement.	Motor.	Motor Endorsement.	Total.
First ..	2	9	2	6	6	25
Second ..	..	14	..	7	..	21

Candidates sitting for Third Marine Examination total 113 ; of these 75 passed and 38 failed.

Candidates sitting for First-class Coastal Motor Certificates total 9 ; of these, 8 passed and 1 failed.

Candidates sitting for Second-class Coastal Motor Certificates total 22 ; of these, 18 passed and 4 failed.

The remaining 69 candidates were examined for River Engineer (Steam) and Restricted Limits P.V.O.S. (Oil) Certificates of Competency ; of these, 2 passed and 1 failed for River Engineer, and 57 passed and 9 failed for the Restricted Limits P.V.O.S. Engineer's Examination.

In addition to above, 9 candidates were examined for the Engineering Knowledge Section of the Restricted Limits P.V.O.S. Master's Certificate.

POLLUTION OF WATERS

The fact-finding survey on the extent and causes of pollution of inland and coastal waters and on the law and administrative machinery for enforcing it was completed for the Interdepartmental Committee, and the report was submitted to Cabinet.

The report showed that, partly because of inadequacies of existing law and because of excessive division of administration responsibility, there had, over a long period, been a progressive increase in pollution in New Zealand. In some cases to-day pollution results in serious economic loss. Instances of this are—

(1) The manurial value of cowyard refuse drained into streams each year is estimated to be equivalent to £500,000 worth of artificial fertilizer.

(2) A single gold-sluicing claim, on a portion of the Buller River system, during a ten-year period sluiced into the river about 900,000 more cubic yards of material than the dredge removed from inside the Westport Harbour (as distinct from bar dredgings).

More usually pollution is objectionable either because it threatens the interests of local authorities, farmers, and industrialists who require to draw clean waters from natural streams, or because it fouls and renders unpleasant beaches and streams where the average citizen, his wife, and children may wish to bathe or picnic.

No less than ten different statutes contain provisions about pollution. Such statutes, and regulations and by-laws made under them, are administered by six different Departments and by over three hundred local bodies of several types. Because of the multiplicity of administrative authorities and the absence of adequate liaison, there is often neglect of action on the assumption that some one else is attending to matters. In other cases, there is uneconomic overlapping of adminsitrative activity which is irritating and confusing to industry. Those seeking to establish new industries are confused because no one authority can give complete approval of drainage plans in advance. In consequence, industrialists either ignore all authorities, or "hawk" their problems from Department to Department or from local body to local body.

Legislation has not been changed to keep pace with industrial development. In consequence, much present law is obsolete and inherently partial. For instance, in mining districts there is almost complete freedom to put mining refuse into streams, while discharge of sawdust into the same water is actionable. Under one statute discharge of certain industrial wastes is proscribed, while other equally noxious substances have, in practice, almost free entry because the burden of proof of damage done is difficult or expensive to discharge.

Again there is evidence that certain authorities, which have statutory obligations to prevent pollution by others, find themselves compromised by pollution arising from their own undertakings. Cases sometimes arise where, in disregard to statutory obligations, local authorities consider they have a duty to protect local ratepayers causing pollution from administrative activity. The record of activity of Government Departments themselves is not very satisfactory, although recently much has been done to limit pollution by State activities.

Government Departments have been able to make progress in co-ordinating their own activity regarding control of pollution, but they have considered it desirable to have the co-operation of local authorities if a comprehensive approach to the whole question of pollution is to be made. On the recommendation of the ten member Departments comprising the Interdepartmental Committee, legislation was drafted which aimed at establishing a national pollution council with departmental and local-body representation. The Bill contemplated a council with functions which, initially, would have been largely co-ordinating and advisory. The Bill would have added nothing to existing penal provisions, because experience has shown that penal provisions alone have been

inadequate to stop a progressive deterioration in the situation. This Bill was finally withdrawn, after opposition had been shown by some local bodies. There was no evidence of direct industrial opposition. The partial failure of local-body support for the measure probably reflected inadequate preparation of public opinion and unwarranted fears that the measure might impinge substantially on local body jurisdiction.

Following the withdrawal of the Bill last session, Cabinet instructed that the Marine Department should meanwhile exercise generally such functions as were proposed for the statutory council excepting only any powers which only the Legislature could have conferred. The Marine Department was empowered to reconstitute a small Inter-departmental Committee, and this at present includes, in addition to departmental officers, representatives of the Health Department and Ministry of Works, together with the Dominion Analyst. While this Committee is of some service, the problems facing it are too great to be dealt with competently by a non-authoritative body comprising officers whose regular duties occupy their time fully.

The longer a comprehensive approach is delayed to the pollution problem, the greater will be the ultimate difficulty of solving it. At present there is no adequate machinery to deal fairly and adequately with existing pollution or to advise new industries as to the conditions under which they may operate in future years.

PHYSICAL AND SPIRITUAL WELFARE OF SEAMEN

No report would be complete without reference to and appreciation of the silent work performed by voluntary helpers for all seamen in our ports. Space does not permit publication of details of ships visited, seamen contacted, books distributed, sick seamen visited in hospital, and entertainment provided year by year. Splendid work has been performed by the Missions to Seamen, the Apostleship of the Sea, the British Sailors' Society, and the Flying Angel Mission.

SURVEY OF SHIPS

During the year ended the 31st March, 1950, survey certificates of the following various categories were issued by the Marine Department:—

Survey Certificates—		
Foreign-going Passenger Ships	4	
Foreign-going Cargo Steamships	1	
Foreign-going Cargo Motorships	5	
Home-trade Steamships	28	
Home-trade Motorships	80	
Restricted Limits Steamships	30	
Restricted Limits Motorships	311	
		459
Equipment Certificates—		
Restricted Limits	1	
Home-trade	18	
Foreign-going	19	
		38
Total		497

Surveys were also made in 262 cases for seaworthiness, efficiency of equipment, tonnage measurement, radio-telegraphy, &c., as against 303 such surveys made in 1948–49. Included in these totals are surveys made on overseas ships not registered nor normally surveyed in the Dominion.

Two new vessels built overseas have been added to the New Zealand merchant fleet. They are the twin-screw motor vessel "Mamaku," of 926 gross tons, built in Scotland in 1949 for the Anchor Shipping and Foundry Co., Ltd., and the single-screw motor vessel "Tainui," of 539 tons gross. "Tainui" was built in Sweden, named

"Vestria," in 1945, and bought in 1949 by the Northern Steamship Co., Ltd. An almost similar ship, "Viria," has been surveyed and operates on charter in the intercolonial trade on a New Zealand certificate. This vessel cannot be transferred to British Registry so long as she is foreign-owned.

Small vessels carrying passengers or cargo and plying on rivers, lakes, and harbours have been augmented during the year by fourteen others. Seventeen surveyed vessels have been re-engined. An extensive conversion and refit of the Government motor vessel "Ranui" has been made to fit her for tropical service under the control of the Department of Island Territories. This work, in accordance with past Government policy, has been carried out by the Naval Dockyard at Auckland.

Dry-dock congestion at the Port of Auckland has continued throughout the year. The figures given below show that during recent years the demands on existing Auckland dry-dock accommodation are steadily increasing and that if the rate of increase is maintained it will be necessary for the Port of Auckland to provide additional dry dock facilities soon.

Port.	Percentage of Total Tonnage of New Zealand Ships Dry-docked for Annual Survey.		
	1947–48.	1948–49.	1949–50.
Wellington	40·5	45·0	33·2
Auckland	39·0	40·0	53·6
Lyttelton	11·5	4·0	7·2
Port Chalmers	9·0	11·0	6·0

From 1st January, 1950, ships registered in New Zealand have been fully surveyed periodically, as required by the Shipping and Seamen Acts. A partial suspension of surveys was permitted as a wartime relaxation under the Shipping Survey and Deck Cargo Emergency Regulations 1943, which have now been revoked. In some maritime countries while passenger ships must be fully surveyed by a Government agency, cargo ships may be partially surveyed by a private classification society. The legislatures of New Zealand, the United States, and some other countries, however, in requiring that there shall be a full Government survey for every ship irrespective of whether she carries passengers or not, subscribe to the principle that there should be only one standard for safety of life at sea without distinction between the lives of passengers and crew.

After forty-five years' service as a passenger ship engaged for many years in the Wellington–Nelson service, the "Arahura," of 1,608 gross tons, has been permanently withdrawn from service and sold to shipbreakers at Wellington. "Arahura" was built in 1905 by Denny Bros., the Dumbarton shipbuilding firm which built most of the earlier New Zealand passenger steamers. Apart from minor mishaps, the active career of "Arahura" has been successful. She was one of the very few remaining coal-burning passenger ships.

The successor to "Arahura" will be the twin-screw steamer "Ngaio." She is the former American steamer "Hualalai," of Honolulu, and was built in 1929 by the Bethlehem S.B. Corp., Ltd., San Francisco, Cal., for the Inter-Island Steam Navigation Co., Ltd., Honolulu, for tropical service. She is 3,566 gross tons, by British measurement, and is driven by geared turbines of 4,000 shaft horse-power supplied by steam at 280 lb. per square inch from four oil-fired water-tube boilers. "Ngaio" is undergoing extensive alterations at Wellington for a certificate of survey to carry 234 berthed passengers and 35 motor-cars on deck in the Wellington–Nelson service. The passenger and crew accommodation will provide higher standards of spaciousness and general comfort than those of earlier ships in this service. Careful consideration is being given

to fire-prevention arrangements, watertight subdivision, stability and life-saving appliances, and a high standard of safety is assured. "Ngaio" commenced service in May, 1950.

Of the many significant advances made during the past century towards the safety of life at sea none has been responsible for saving more lives and more ships than wireless telegraphy.

Thisyear marks the fiftieth anniversary of the first installation of wireless telegraphy in a ship, for it was in November, 1899, that the steamer "St. Paul," 66 miles out to sea, received a message transmitted by Marconi by wireless telegraphy from the Isle of Wight. But it was not until 1909 that the prodigious safety value of wireless telegraphy fully gripped the imagination of the world when the British steamer "Republic" was in collision with the Italian steamer "Florida," and while the "Republic" sank beneath his feet the radio officer guided the rescuers to the darkened ship through the thick fog that had enshrouded her. Since the "Republic"–"Florida" disaster, wireless telegraphy, or radio telegraphy as it is now commonly called, has been responsible for saving very many thousands of lives at sea.

Following the conclusion of the third International Conference on Safety of Life at Sea, held in London in 1948, an Inter-Departmental Working Party, comprising officers of the Marine Department and the New Zealand Post Office, has drafted new radio regulations for New Zealand ships. The draft regulations include not only the minimum requirements of the 1948 Safety of Life at Sea Convention, but also radio provisions for all coastwise ships for which it is practicable to provide a measure of radio protection.

Much attention has been given to the extended application of radio telephony in certain classes of coastwise ships, and collateral proposals have been prepared for the consideration of Government for improving the facilities for transmitting and receiving radio-telephone messages in all waters within fifty miles of the New Zealand coast. A survey of the present radio telephone installations in New Zealand ships has indicated that the utility of this modern development in marine telecommunication technique has been widely recognized by New Zealand shipowners. The draft New Zealand Merchant Shipping Radio Regulations have been circulated for comment amongst the various interests concerned, and it is hoped that the final draft of the proposed regulations will be available for submission to the Government within a few months.

That the use of coal for ship propulsion is still declining is evident by the withdrawal from service of two New Zealand coal-burning colliers, and by the conversion from coal to oil fuel of the aged dredge, "Paritutu," owned by the New Plymouth Harbour Board. Factors prejudicing the use of coal at sea are several. There is the marked disinclination to-day of men to engage in the arduous and relatively unpleasant task of coal-firing boilers. Indeed, some coal-burning ships have been so delayed through shortages of firemen that recourse to oil-firing has been almost obligatory for this reason alone. Other factors prejudicial to coal-burning are the larger complement of crews, the shortage of suitable steam coal, and the large coal bunker spaces necessary as compared with the storage space required for fuel oil. The large majority of New Zealand tonnage is, and will be increasingly, dependent upon imported fuel oil. An interesting exception is the dredge "Paritutu," which is to burn residuum from petroleum produced from oil wells in the Moturoa (Taranaki) district. This is believed to be the only steamer in New Zealand which is steamed by fuel oil produced from New Zealand oil-wells.

Arising from the serious mishap which occurred to the steamer "Holmlea" in February, 1949, when loose coal choked the fixed suction pipes of the bilge pumping systems so that the boiler room flooded and the ship became thereby totally disabled,

the Department has required that in every coal-burning steamer there shall be provided in the stokehold, in addition to the fixed bilge suction pipes, a flexible suction hose so connected to the bilge pump that the hose can be used to draw water from either side of the stokehold. The flexible hose will be a valuable alternative means of clearing bilge water from a stokehold should fixed bilge pipes become so choked with coal or ashes that they cannot be promptly cleared at sea.

The need for a measured-mile course for conducting ship speed trials in Wellington Harbour has been long known. During the year the local authorities concerned surveyed a nautical mile course parallel to the Hutt Road and erected suitable land beacons. The measured mile course now established satisfies the requirements that it shall be clear of ship traffic and reasonably free from tidal disturbances and shall have an ample depth of water. Speed trials of m.v. "Kaitangata" conducted on the Wellington measured mile have provided the suitability and usefulness of this new maritime amenity.

The loss by fire at sea is reported of the passenger motor launch "Miss Mount Maunganui," on the 17th January, 1950, while on a voyage from Whangamata to Tauranga. The vessel rolled heavily and caused a lighted primus stove in the cabin to fall to the floor. As a result a full bottle of methylated spirits in the cabin was broken, and shortly after a second bottle of methylated spirits exploded. A fire occurred in the cabin which soon extended throughout the length of the launch and burnt her to the water's edge. It is fortunate that the man and youth on board were successful in making their escape from the burning vessel into the dinghy and thence to the shore without injury.

"Miss Mount Maunganui" had on board two fire-extinguishers, but one which was in the burning cabin was not accessible for use, and the other extinguisher alone was quite inadequate to deal effectively with the fire. The loss of the vessel is attributable in the first instance to the primus stove not being suitably fixed so that it could not be overturned.

INSPECTION OF MACHINERY

Steam Boilers, Air and Gas Receivers, and Unfired Steam-pressure Vessels

The following statement sets out the number of inspections made during the year ended 31st March, 1950, of steam boilers and unfired pressure vessels subject to steam, air, and refrigerant gas pressure (Group "A") and the corresponding figures for 1948–49. The figures include hydraulic tests applied at first inspections:—

	1949–50.	1948–49.
Steam boilers	4,730	4,551
Unfired pressure vessels	12,600	11,541
Hydraulic tests	1,557	709
Total inspections in Group "A" ..	18,887	16,801

The inspections included 75 new power boilers manufactured in the Dominion, and 26 new boilers imported from abroad. Most of the new boilers imported from abroad were of the large high-pressure water-tube type which, as yet, cannot be manufactured in New Zealand.

The inspections also include 81 new air-receivers made in New Zealand and 50 made abroad, and 280 new unfired pressure vessels, other than air-receivers, made in New Zealand and 172 made abroad.

Machinery

The following statement shows the number of machines, machinery plants, lifts, cranes, hoists, and tractors (Group "B") inspected during the year ended 31st March, 1950, and the corresponding figures for 1948–49:—

	1949–50.	1948–49.
Machines driven by steam power in 1393 plants	6,426	7,270 (1,449 plants)
Machines driven by power other than steam in 13,614 plants	95,530	88,287 (12,481 plants)
Electric-power-supply units	152	63
Lifts	3,696	3,665
Cranes	744	729
Hoists	2,182	1,988
Tractors	299	269
Total inspections in Group "B"	109,029	102,271
Total inspections in Group "A"	17,330	16,801
Grand total of inspections (Groups "A" and "B")	126,359	119,072

The increase of total machinery inspections of 6 per cent. since 31st March, 1949, indicates the continuance of the rapid extension of the mechanization of New Zealand industry.

Plans of all new boilers, air and gas receivers, and other unfired pressure vessels and of new cranes and lifts totalling 752 units were examined and approved by the Inspection of Machinery Branch during the year ended 31st March, 1950. They included 54 new power cranes and 14 lifts.

For the year the number of reported machinery accidents involving personal injury or death totalled 111, of which 4 were fatal and 107 non-fatal. The corresponding accidents for the previous year were 134, of which 10 were fatal.

It is pleasing to record a slight reduction in the non-fatal category and a substantial reduction in the fatal category.

One fatal accident arose from an attempt by a tractor-driver to oil a tractor-shaft coupling while it was in motion, and resulting in his clothing being caught and his being killed in the machinery; the second from the development of tetanus following hand injuries caused by the victim's inserting his hand in the roller of a wool-blending machine whilst it was moving; the third fatality was due to the deceased being caught in the moving driving-belt of a portable saw bench, and the fourth by a lift cleaner being crushed between the moving lift car and the fixed lift enclosure.

The circumstances of every accident, fatal and non-fatal, have been investigated by the Department, and improvements effected in the machine or guards wherever practicable. It is pleasing that the number of fatal accidents is below the average for several years, but investigations of this year's fatalities again confirm the fact that it is the new or casual worker with machinery who is generally fatally deceived by the apparent harmlessness of moving machinery.

Action has been taken to reduce the danger arising from rotating saws which are not in continuous use by requiring in all such cases that efficient stopping and starting appliances shall be fitted. These in the cases of saws driven by belts from line shafting comprise fast and loose pulleys. In the case of saws each driven by its electric motor start and stop switches are required to be fitted conveniently near to each saw.

A wide variety of industrial accidents, how they happen, and how to prevent them is described in quarterly pamphlets published by the United Kingdom Ministry of Labour and National Service. The publication of these useful pamphlets, suspended during the war, has been resumed, and they are now being regularly supplied to the Inspectors of Machinery in New Zealand.

In the following table is given an analysis of the fatal and non-fatal machinery accidents which occurred during the year, indicating the principal machines and industries :

Machine and Industry Analysis of Accidents, 1949–50

Description of Accidents.	Industries.											Totals.	
	Woodworking.	Textile.	Refrigeration.	Printing.	Metal-working and Engineering.	Laundry.	Butchery.	Confectionery and Bakery.	Boxmaking.	Other Industries.	Total Accidents (Machinery).	Fatal.	Non-fatal.
Circular saws	14	..	..	..	..	..	..	..	..	..	14	..	14
Planers	1	..	..	..	..	..	..	..	..	..	1	..	1
Shapers	1	..	..	..	4	..	..	..	..	..	5	..	5
Power press	..	..	..	2	6	..	..	..	..	2	10	..	10
Guillotines	..	..	..	1	1	..	..	..	..	..	2	..	2
Laundry machinery	..	..	..	..	..	..	..	..	..	..	..	..	..
Cranes and hoists	..	..	..	..	1	..	..	..	..	5	6	..	6
Lifts	..	..	..	..	..	..	..	..	..	2	2	1	1
Belting	1	..	..	..	..	..	..	..	..	..	1	1	..
Shafting	2	..	..	..	..	..	..	..	..	3	5	1	4
Gearing	..	..	..	1	..	..	..	..	..	..	1	..	1
Mincers and other cutting machines	1	..	2	..	..	..	2	1	..	2	7	..	7
Others	7	10	2	1	4	2	..	9	1	21	57	1	56
Total accidents	27	10	4	5	16	2	2	10	1	35	111	4	107

The opportunity has been taken during the year to thoroughly revise, consolidate, and bring up to date the departmental rules governing the design, construction, maintaining, and testing and operation of power lifts. The current lift practice of the United Kingdom, Australia, and the United States has been closely studied, and there have been consultations between the Department and New Zealand lift manufacturers and others concerned. The revised rules apply to every new lift built or constructed and to every existing lift materially altered after the 31st December, 1949. It is believed that the revised rules provide a lift code which will ensure a high standard of safety in all future new lifts. After careful consideration and tests and a personal investigation made by the Chief Inspector when in the United Kingdom the Department has approved the application of multi-vee belt drives for lift machines. Properly designed multi-vee belt drives have been proved to be reliable, safe, and silent in operation.

Careful attention is given by the inspecting staff to the improvements of the standards of safety of many old lifts, and there are frequent consultations with owners seeking such improvements in safeguards as are practicable. The Department acknowledges the co-operation given in maintaining lift safety by the electrical supply authorities, city and borough authorities, architects, engineers, and lift manufacturing and maintenance firms. The very large majority of lifts are electrically driven and are affected by any interruption of the power supply. In the event of power failure there may be a stoppage of a car between floors, and passengers cannot be released from the car until aid is

forthcoming to wind the car by hand power to the nearest floor landing. Lift passengers caught in this dilemma are inconvenienced and occasionally alarmed, but they are in no danger so long as they do not attempt to get out of the lift car until it has reached a floor landing.

The head of a $\frac{3}{16}$ in. metal screw was sufficient to cause a loaded lift in Parliament Buildings to partially run away. The head of a screw had broken off and so jammed the brake mechanism that the brakes became worn and out of adjustment and were eventually unable to prevent the loaded lift car from making an involuntary descent, fortunately, without seriously injuring any of the lift passengers.

Accidents in the use of farm tractors, generally involving loss of life, have in recent years reached disturbing totals. While the usual kind of tractor accident on a farm or road is not a " machinery accident " under the Inspection of Machinery Act, cases have arisen, and no doubt will arise, where mechanical defects or deficiencies in the design or safeguards of tractors and their attached machinery have been responsible for accidents involving life and limb. Inspectors of Machinery, in association with the officers of the Department of Agriculture, will in future investigate every tractor accident which is suspected to be due to mechanical defects.

In support of a training course for Labour and Health Inspectors in Safety Health and Welfare, an engineer officer of the Marine Department in 1949 prepared and delivered a series of illustrated addresses on machine safety, supplemented by visits with the trainees to Wellington factories where power machinery is used which would be dangerous if it were not adequately guarded. Similar addresses on machine safety have been arranged for at other manufacturing centres.

A violent explosion from a make-shift steam boiler occurred in a bush district. The boiler was made from a 40-gallon petrol drum. It had a stop valve, but no pressure gauge to indicate steam pressure, nor any safety valve to relieve the pressure. The drum was three-quarters filled with water and placed over a fire aided by 2 gallons of diesel oil. Steam which was generated was being used by the two men concerned when a terrific explosion occurred and the petrol drum blew up. The force of the explosion projected the wrecked petrol drum like a rocket for a distance of about 3 chains. One of the two men standing 6 ft. from the make-shift boiler was bodily hurled 20 ft., and suffered severe burns and shock, from which he fortunately recovered. At least one of the men concerned should have realized in the first instance the extreme folly of attempting to use an oil drum or any other uncertificated container as a steam boiler, for he held a Second-class Engine Driver's Certificate. He should also have known quite well that a safety valve was an essential fitting on any closed vessel in which steam is generated.

Defects developing in shell plates of aged boilers are always possible, and do in fact occasionally occur. But serious defects discovered this year in a shell plate of a large water-tube boiler less than a year old were unexpected and almost unprecedented in New Zealand. The defects took the form of a want of homogeneity of the steel plate, which was indicated by a number of laminations or cracks which penetrated the boiler plate at acute angles to the surface. Lamination defects can be due to slag inclusions in the steel billet when it is rolled out into plates. There is no safe repair for a laminated boiler plate. The boiler drum will be completely renewed. This will eventually involve a large dismantling and re-erection job at the freezing works concerned. To avoid any dislocation of the works during its killing season, due to the shutting down of the boiler, the Department has reduced the steam pressure and permitted the boiler to continue to operate under special supervision for a few months. The defective boiler plate was made by a British steel works of high reputation and long experience.

GENERAL HARBOUR REGULATIONS

Waterfront Accidents

For the year ended 31st March, 1950, 256 accidents were reported under regulation 103 of the General Harbour Regulations. These accidents were suffered by persons engaged in the loading and unloading and repair of ships. The number of accidents for the previous year ended 31st March, 1949, was 323, including one fatality. It is satisfactory that there has been a steady decline in the number of accidents over the past four years. In 1946–47 there were 348 such accidents, of which 5 were fatal, whereas of the 256 accidents reported in 1949–50 none was fatal.

The following is an analysis of the accidents, and their causes :—

	1949–50.	1948–49.
Handling goods	99	90
Persons slipping or falling	28	56
Persons struck by swinging or falling loads	79	92
Persons stepping on or striking fixed objects	11	22
Contact with power-driven machinery	2	2
Failure of gear	5	16
Not otherwise classified	32	45
	256	323

Handling goods is a cargo-working process which continues to account for more than one-third of the reported accidents. Next in order of causation of accidents are swinging and falling loads. These two groups account for about 70 per cent. of the total waterfront accidents reported. Some of these unfortunate accidents can be attributed to inherent deficiencies in human alertness arising from physical infirmities such as partial deafness, impaired vision, or the slowing down of mental and physical agility usual at the onset of old age. But when accidents occur to younger workers of normal physical and mental standard there is good reason to believe that many such accidents might have been avoided entirely, or their severity mitigated, if before entering the waterfront industry these workers could have been more adequately instructed in safe practices in working cargo into and out of ships.

Any substantial reduction in the present accident rate on the waterfront is a goal which is likely to be attained more by the method of waterside worker training in safe practices than by technical improvements in cargo gear.

Dangerous Cargoes

Sea-borne trade includes the carriage of a large number of dangerous substances which, if not safely stowed and handled, constitute grave hazards to the ships concerned. Even more grave are the hazards of fire and explosion to which improperly handled dangerous cargoes in ships may expose ports and adjacent cities. Recent examples are the disastrous ammonium nitrate ship fires and explosions which occurred in the United States at Texas City, in France at Brest, and in Melbourne.

During the past year the Department, by the direction of the Minister of Marine, has circulated to shipowners, Harbour Boards, and Surveyors precautionary information and directions on the proper handling of ammonium nitrate and the various chlorates, which are dangerous substances.

An extensive revision of the United Kingdom regulations on the carriage of dangerous goods and explosives in ships has been proceeding in recent years. The subject, being extensive and technically complex, is one in which international agreement by the maritime powers is desirable. So far international agreement on the carriage of dangerous goods has been limited to the statement of definitions and general principles contained in the International Convention for the Safety of Life at Sea, 1948.

Until there is an acceptable international code of practice for the carriage and handling of dangerous goods and explosives in ships, the current precautions officially recognized in the United Kingdom will continue to provide a useful guide for New Zealand shipowners, harbour authorities, and ship Surveyors.

EXAMINATION OF LAND ENGINEERS, ENGINE-DRIVERS, CABLE-TRAM DRIVERS, AND ELECTRIC-TRAM DRIVERS

Examinations for certificates issued under the Inspection of Machinery Act, 1928, were conducted at intervals during the year by Inspectors of Machinery throughout the country.

For the year ended 31st March, 1950, the candidates who presented themselves for examination totalled 532: of these, 445 passed and 87 failed, as compared with 520 successful candidates and 106 failures of the previous year.

In addition to the 445 certificates issued in 1949–50 to successful candidates 85 certificates were issued as replacements, &c., under the provision of sections 53, 59, and 62 of the Inspection of Machinery Act, 1928.

An analysis of the certificates issued during the year, with the corresponding figures for 1948–49, is given hereunder:

Class.	1949–50.	1948–49.
Service—		
First class engine driver	3	6
Competency—		
Extra first class stationary engineer	2	..
First class engine driver	38	63
Second class engine driver	303	289
Locomotive and traction	50	69
Locomotive engine driver	10	8
Traction engine driver	6	7
Electric tram driver	98	175
Electric tram driver (one man car)	8	8
Cable tram driver	7	13
Steam winding engine driver	1	1
Electric winding engine driver	4	1
	530	640

Appended to this report is a statement of the number of candidates examined at each examination centre for the year ended 31st March, 1950, showing the number of successful and unsuccessful candidates.

A few special examinations were granted, but the holding of special examinations is not encouraged as it is considered that the regular examinations are of sufficient frequency, and, except in very exceptional circumstances, candidates are expected to attend the scheduled examinations.

The shortage of certificated engine drivers for stationary steam plants is still as acute as it has been in previous years for the past decade. Where a steam plant would be shut down for lack of a certificated engine driver the Department, on the report and recommendation of an Inspector of Machinery, authorizes a temporary permit for an uncertificated person to take charge of the steam plant.

NEW ZEALAND STANDARDS INSTITUTE

The Marine Department has again been actively associated with the New Zealand Standards Institute in connection with the Mechanical Engineering Divisional Committee and the Executive Committee.

Following the tragic Ballantyne fire at Christchurch in 1947, the Department has co-opted a member of the staff to assist a Standards Committee to redraft a comprehensive series of New Zealands Standards for fire-extinguishing appliances.

The Marine Department has a long experience in the protection of ships from fire hazards which is of practical help for the task engaging the attention of the Standards Institute Fire Extinguishers Committee.

The Department has also examined and commented upon many British and New Zealand standards dealing with a variety of other technical subjects, including general mechanical engineering, welding, and packaging and marking of goods for transport.

STAFF

I desire to express my appreciation of the work of the whole of the staff during the past year. The co-operation, loyalty, and conscientious devotion to duty has been of high calibre.

FISHERIES

A comprehensive report on the working of the Fisheries Branch of the Department follows hereon, together with a report on the operations of the Marine Biological Station at Portobello.

I have, &c.,

W. C. SMITH, Secretary for Marine.

REPORT ON FISHERIES FOR THE YEAR ENDED 31st MARCH, 1950

Attention is drawn to the fact that all fisheries statistical data in this report is for the calendar year ended 31st December, 1949.

The estimated total quantity and value of the principal classes of fishery products marketed in the year 1949 are as follows:—

	Quantity.	Value. £
Wet fish	449,903 cwt.	864,332
Whitebait	7,899 cwt.	204,269
Oysters—		
Dredged	97,336 sacks	81,519
Rock	5,076 sacks	8,744
Mussels	14,845 sacks	4,912
Crayfish	36,771 cwt.	99,034
Whale oil	973 tons	36,000
Fish livers	783,307 lb.	31,006
Total values		£1,329,816

The detailed landings are summarized in Tables I to VI (pp. 45 to 58).

The total landings of wet fish show an increase of 3,638 cwt. over the previous year's total of 446,265 cwt., while the total value has increased by £25,998. The quantity of oysters dredged from Foveaux Strait has increased by 2,892 sacks, and the rock oysters have decreased by 617 sacks. The crayfish total is up by 9,541 cwt., and the quantity of mussels is up by 431 sacks.

In the most important group, the "wet fish"—*i.e.*, all the ordinary fishes caught by all methods of sea fishing—the annual totals for successive years are as follows:—

	Total Quantity. cwt.	Total Value. £		Total Quantity. cwt.	Total Value. £
1934–35	331,415	294,267	1942–43	311,971	442,976
1935–36	363,448	313,106	1943–44	294,445	489,268
1936–37	363,128	360,406	1944	308,237	522,954
1937–38	355,687	413,516	1945	331,773	558,404
1938–39	356,114	424,643	1946	380,321	660,096
1939–40	339,231	416,480	1947	438,300	802,496
1940–41	328,594	440,308	1948	446,265	838,334
1941–42	326,863	458,393	1949	449,903	864,332

The total weight of wet fish landed 449,903 cwt., although the highest recorded total represents only the small increase of 3,638 cwt. This increase is slightly less than half the increase shown last year. Compared with the great increases in the years immediately following the war, the figures for the last two years show that an increased level of production has been reached as a result of the greatly increased fishing potential to which reference was made in last year's annual report. In the course of the next year or two the effect of this increased fishing potential on the stocks of fish should become apparent.

Reference to the figures above setting out the quantity and value of wet fish landed since 1935 show that the value has risen more steeply than has the quantity. In spite of this, however, a number of the medium and larger units are finding the cost of maintaining this increased fishing potential out of proportion with the increased return to-day. Unfortunately, adequate figures are not available for publication to present the picture showing the cost of the production over these years.

Fishing Vessels and Personnel

The number of licensed fishing vessels operating in 1949 was 855, the number of men employed on them being 2,355. This represents an increase of 42 units, most of which occurs on the class motor net and line vessels. The details of the arrangement of the fleet in respect of the various classes of fishing vessels operating at each of the ports is shown in Table II.

Fish Landings

The total landings of fish and shell-fish landed at the various ports are shown in Table I.

A table showing the total quantity and value of each kind of fish is set out below. Snapper is the most abundant species, and the other species, headed by tarakihi, are nearly in the same proportion as before.

Kind or Class of Fish.	Quantity.				Value.			
	Cwt.		Percentage of Total.		£		Percentage of Total.	
	1949.	1948.	1949.	1948.	1949.	1948.	1949.	1948.
Snapper	134,517	148,828	29·90	33·35	214,933	234,224	24·87	27·94
Tarakihi	111,010	93,251	24·67	20·90	193,354	163,508	22·37	19·52
Hapuka	38,752	32,771	8·61	7·34	130,296	108,234	15·07	12·91
Blue cod	29,779	32,877	6·63	7·37	72,667	71,863	8·41	8·57
Gurnard	25,203	22,239	5·60	4·98	24,916	22,424	2·88	2·68
Sole	24,681	23,911	5·48	5·36	74,510	73,481	8·62	8·77
Flounder	17,752	18,581	3·94	4·16	64,567	64,773	7·47	7·73
Barracouta	13,129	13,090	2·93	2·93	5,625	6,391	0·65	0·76
Ling	11,764	12,060	2·61	2·70	22,950	25,213	2·65	3·01
Trevally	6,651	9,326	1·49	2·09	5,111	7,846	0·60	0·90
Elephant fish	6,146	4,701	1·38	1·05	13,238	9,815	1·53	1·17
"Mixed rounds"	4,576	7,949	1·03	1·78	2,674	6,580	0·31	0·78
Pioke	4,099	3,502	0·91	0·78	5,004	4,677	0·58	0·56
Moki	3,964	2,401	0·88	0·54	6,472	4,084	0·75	0·49
Red cod	2,890	4,654	0·64	1·04	2,591	4,784	0·30	0·57
Shark	2,439	1,476	0·54	0·33	3,156	1,610	0·37	0·19
John-dory	2,038	826	0·45	0·19	3,107	1,252	0·36	0·15
Mullet	1,961	2,240	0·44	0·51	3,385	3,541	0·39	0·42
Hake	1,934	2,452	0·43	0·55	5,850	7,712	0·68	0·92
Herring	1,591	1,397	0·35	0·31	1,649	1,149	0·19	0·14
Butterfish	1,129	1,572	0·25	0·35	3,618	4,794	0·42	0·57
Whiptail	544	344	0·12	0·08	457	244	0·05	0·03
Kahawai	534	1,220	0·12	0·27	466	1,131	0·05	0·14
Mackerel	532	172	0·11	0·04	375	118	0·04	0·01
Kingfish	452	229	0·10	0·05	673	359	0·08	0·04
Warehou	409	405	0·09	0·09	639	802	0·07	0·10
Cream fish	287	289	0·06	0·06	201	202	0·02	0·02
Sardine	223	896	0·05	0·20	156	1,046	0·02	0·12
Brill	162	25	0·04	0·01	548	70	0·06	0·01
Conger-eel	157	169	0·03	0·04	161	121	0·02	0·01
Parore	145	80	0·03	0·02	198	69	0·02	0·01
Trumpeter	123	381	0·02	0·09	282	1,064	0·03	0·13
Garfish	116	20	0·02	0·01	338	68	0·04	0·01
Whiting	91	..	0·02	..	70	..	0·01	..
Perch	79	32	0·02	0·01	58	21	0·01	0·01
Skate	32	10	0·01	0·01	19	11	0·01	0·01
Maomao	6	10	..	..	9	10	..	..
Frost-fish	5	11	..	..	8	11	..	..
Bonita	1	..	..	..	1	..	..	..
Totals	449,903	444,397	..	..	864,332	833,302	..	..

Mixed flats, swordfish, and tuna which appeared on the 1948 total have been dropped, no catches of these fish being recorded in 1949.

Methods of Capture

A table showing the total quantity of wet fish caught by each of the common methods of fishing is shown below, with the 1948 figures included for comparison :—

Method of Fishing.	Quantity.				Value.			
	Cwt.		Percentage of Total.		£		Percentage of Total.	
	1949.	1948.	1949.	1948.	1949.	1948.	1949.	1948.
Trawl	249,656	216,505	55·49	48·51	450,065	396,597	52·07	47·30
Danish seine	65,291	88,980	14·51	19·94	95,178	130,112	11·02	15·52
Long and hand lines ..	103,933	102,496	23·10	22·97	248,664	232,862	28·76	27·78
Set and drag nets ..	31,023	38,284	6·90	8·58	70,425	78,763	8·15	9·40
Totals ..	449,903	446,265	..	..	864,332	838,334	..	..

The steam-trawlers landed a total of 87,980 cwt. (19·56 per cent.), while motor-trawlers landed 161,676 cwt. (35·93 per cent.). Motor-vessels (net and line fishing) landed 132,119 cwt. (29·37 per cent.), and row-boats 2,837 cwt. (0·60 per cent.).

The decrease in the quantity caught by Danish-seine boats is due to a number of these boats changing to trawl fishing. The increase (33,481 cwt.) in the catch by motor-trawlers is in part due to this change from Danish seining to trawling, and it is in the motor-trawl catch principally that the increase of 3,638 cwt. over last year's total occurs.

Landings at the Ports

For administrative and statistical purposes the port of registry of a number of vessels was changed during the year. At the same time definition on an arbitrary basis was made of the grouping of the landing places specified on the individual licences so as to include each boat in a port or area recognized at present in the tables. This was necessary, because of the state of flux especially in the more remote areas, to keep the statistical tables comparable. Appendix No. I shows the grouping that forms the basis of the statistical tables that follow.

Ports where the total landed catch is in excess of 10,000 cwt. are shown in order of importance in the table below. The percentage of the grand total is also included :—

Port.	Quantity.				Value.			
	Cwt.		Percentage of Total.		£		Percentage of Total.	
	1949.	1948.	1949.	1948.	1949.	1948.	1949.	1948.
Auckland	133,169	142,766	29·6	31·99	193,504	208,079	22·39	24·82
Wellington	50,617	40,117	11·25	8·99	114,554	91,255	13·25	10·89
Port Chalmers ..	41,359	38,460	9·19	8·62	65,264	59,404	7·50	7·09
Napier	25,320	27,254	5·63	6·11	45,730	53,329	5·29	6·36
Timaru	19,403	20,661	4·35	4·63	50,985	53,615	5·89	6·39
Bluff and Stewart Island	19,197	17,638	4·29	3·95	54,140	44,323	6·26	5·29
Thames	17,602	17,105	3·91	3·83	32,764	31,858	3·79	3·80
Lyttelton	15,223	12,520	3·38	2·81	33,679	27,487	3·89	3·28
Gisborne	14,675	13,260	3·26	2·97	22,233	21,432	2·57	2·56
Nelson	14,069	11,314	3·13	2·54	23,863	20,074	2·76	2·39
Tauranga	12,948	13,763	2·88	3·08	20,572	20,064	2·38	2·39
Total ..	363,582	354,858	54·23	79·52	657,288	630,920	75·97	75·26

The Ports in Review

In this section the production of the individual ports is reviewed over a period of five years. The species shown separately are arranged in order of importance for the year 1949.

NORTH ISLAND

Mangonui

	1945.	1946.	1947.	1948.	1949.
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
Total quantity landed ..	2,105	3,300	4,058	2,533	1,783
Snapper	814	1,142	727	1,040	733
Mullet	281	206	328	358	322
Shark	..	5	..	2	265
Trevally	623	1,262	2,228	611	185

The fish caught by motor-vessels using nets during 1948 amounted to 1,508 cwt., and during 1949 amounted to 855 cwt. Motor-vessels using lines caught 824 cwt. in 1948 and 922 cwt. in 1949.

Whangaroa

	1945.	1946.	1947.	1948.	1949.
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
Total quantity landed ..	779	573	904	844	1,058
Snapper	494	264	652	686	794
Shark	..	..	3	..	99
Mullet	16	28	113	15	41
Hapuku	64	56	62	55	39

Bay of Islands

	1945.	1946.	1947.	1948.	1949.
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
Total quantity landed ..	4,194	5,032	4,115	4,071	3,955
Snapper	1,362	1,844	1,734	1,928	1,695
Herring	..	1,013	1,134	1,129	782
Flounder	111	95	88	283	457
Mullet	1,149	184	55	114	372

The quantities taken during 1949 were by lines 1,769 cwt. and by nets 2,186 cwt., as against lines 1,965 cwt. and nets 2,106 cwt. last year.

Whangarei

	1945.	1946.	1947.	1948.	1949.
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
Total quantity landed ..	1,766	2,325	1,930	4,163	5,247
Snapper	859	586	930	3,058	4,246
Shark	90	262	64	141	294
Trevally	387	876	732	601	189
Hapuku	160	205	47	129	158

A motor-trawler which commenced operations during 1948 is the principal cause of the increase in total quantity in 1948 and 1949. During 1949 the quantities taken by the various methods were—trawl 2,656 cwt., lines 960 cwt., and nets 1,631 cwt., as compared with trawl 932 cwt., lines 1,112 cwt., and nets 2,119 cwt. in 1948.

Auckland

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	122,789	141,406	142,304	142,766	133,169
Snapper	81,706	93,792	101,470	110,911	92,262
Tarakihi	23,965	27,788	22,285	17,031	22,604
Gurnard	5,570	7,370	6,199	5,139	5,949
Trevally	3,297	2,015	2,293	4,631	5,397
Hapuku	1,330	1,814	575	737	1,965

Method of Fishing.	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Danish seine	97,608	96,990	90,824	86,191	65,198
Steam-trawl	19,553	36,964	45,309	41,982	35,710
Motor-trawl	..	172	39	8,637	24,756
Line-fishing (motor)	2,493	3,097	2,998	4,287	5,354
Net-fishing (motor)	3,092	4,125	3,050	1,580	2,028

Of the three steam-trawlers one worked for eight months, one nine months, and the third for ten months. The total number of boats Danish-seining was 35, but only 32 of these did sufficient fishing to be regarded as full time.

During the year four Danish-seiners changed to trawling and one transferred to Tauranga. The number of motor-vessels now trawling at Auckland is twelve, as compared with seven at the end of last year. These changes account for much of the variation in the catch by the various methods indicated above.

Thames

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	17,245	10,824	13,035	17,105	17,602
Snapper	10,413	4,754	5,796	8,730	11,511
Flounder	4,246	3,706	4,307	4,849	4,432
Gurnard	1,171	657	882	2,057	1,022

A total of 13,073 cwt. was caught in nets, a decrease of 1,887 cwt., while the total quantity caught by lines, 4,529 cwt., was an increase of 2,384 cwt. as compared with last year.

Coromandel

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	168	156	43	358	930
Herring	..	..	..	241	798
Snapper	161	142	34	113	129

Mercury Bay

(This port now includes Whangamata and Waihi)

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	1,357	1,476	1,222	1,474	1,695
Snapper	881	920	678	1,066	1,131
Hapuku	184	158	135	83	296
Tarakihi	137	137	239	140	110
Shark	..	23	39	11	45

The fish caught by lines totalled 1,667 cwt. and by nets 28 cwt. during 1949, as compared with 1,445 cwt. and 29 cwt. respectively for these methods last year.

Tauranga

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	7,459	6,416	7,086	13,763	12,948
Tarakihi	1,289	1,917	1,998	5,226	10,354
Snapper	2,513	1,459	2,021	4,426	1,633
Hapuku	151	126	244	333	362
Trevally	1,219	1,091	777	2,479	254

The one Danish-seiner operated for one month only during 1949 and landed 93 cwt., as compared with 2,496 for eleven months last year. The number of motor-trawlers was increased to three during 1949. The total quantity landed by trawl was 10,686 cwt., by lines 1,130 cwt., and by nets 1,039 cwt. during 1949, as compared with 5,394 cwt., 1,667 cwt., and 4,206 cwt. for trawl, lines, and nets respectively during 1948.

Whakatane (Including Opotiki)

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	2,074	1,558	902	1,242	1,762
Snapper	1,478	1,027	426	796	1,326
Tarakihi	34	56	51	23	197
Flounder	138	65	114	91	78

The one Danish-seiner at Whakatane operated for eight months last year, but during 1949 used lines only until it changed to trawling in August. The total landings are made up of trawl 889 cwt., lines 595 cwt., nets 278 cwt., as compared with Danish-seine 277 cwt., lines 697 cwt., and nets 268 cwt. in 1948.

Gisborne

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	8,236	10,052	10,926	13,260	14,675
Tarakihi	6,308	7,547	6,864	8,907	8,797
Gurnard	1,167	1,549	1,444	1,117	1,396
Snapper	132	206	197	555	1,108
John-dory	28	87	122	424	1,037
Moki	62	94	139	429	1,028

The steady increase in the total quantity landed still continues. A total of 14,201 cwt. was trawl caught and 474 cwt. line caught during 1949, as compared with 12,453 cwt. by trawl and 806 cwt. by line last year.

Napier

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	19,194	22,249	23,525	27,254	25,320
Tarakihi	9,744	11,489	16,201	19,955	15,625
Gurnard	5,362	5,994	4,180	3,596	3,762
Snapper	520	869	224	224	2,432
Hapuku	1,443	378	715	1,481	1,153

In 1949 the catch by motor-trawlers amounted to 24,606 cwt. and that for the motor line and net vessels amounted to 710 cwt., as compared with 25,827 cwt. and 1,052 cwt. respectively in 1948.

Castlepoint

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	60	40	56	141	136
Hapuku	33	26	42	104	112
Moki	..	3	..	..	13
Snapper	..	3	1	6	7

Wellington

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	31,554	39,744	44,291	40,117	50,617
Tarakihi	16,857	21,204	22,455	23,423	31,234
Hapuku	5,403	7,132	8,017	8,075	9,944
Ling	3,208	4,046	5,420	3,124	2,852
Moki	507	1,143	811	614	1,121
Barracouta	527	394	486	634	1,000

During 1949 the three steam-trawlers landed a total of 34,767 cwt., as compared with 25,764 cwt. in 1948 for two vessels. Similarly, the totals for motor-trawl were 1,127 cwt. in 1949 and 1,132 cwt. in 1948, while motor line vessels caught 14,313 cwt., in 1949 as compared with 12,815 cwt. in 1948. The remaining methods—motor nets, row-boat lines, and nets—landed a total of 410 cwt. this year, as compared with 406 cwt. last year.

Makara

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	308	396	638	677	468
Butterfish	167	129	130	235	154
Warehou	46	158	349	320	84
Snapper	14	9	31	9	80

During 1949 the total for lines was 192 cwt. and for nets 276 cwt., as compared with 80 cwt. and 597 cwt. respectively in 1948.

Paremata

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	2,853	3,816	2,498	2,144	3,443
Hapuku	1,835	2,696	2,122	1,780	3,158
Snapper	45	38	21	41	104
Butterfish	74	105	67	72	64

Of the 1949 total, 3,367 cwt. was taken by lines and 76 cwt. by nets, as compared with 1,981 cwt. by lines and 163 cwt. by nets in 1948.

Paraparaumu

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	497	706	828	506	918
Snapper	275	445	256	243	461
Hapuku	102	72	273	88	234
Butterfish	65	77	237	152	114
Tarakihi	1	8	9	3	63

During 1949 a total of 767 cwt. was line caught and 151 cwt. net caught, as compared with 349 cwt. by lines and 157 cwt. by nets during 1948.

Manawatu (Including Tangimoana)

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	223	179	299	315	308
Snapper	159	77	144	162	141
Flounder	38	81	69	94	139
Gurnard	5	11	12	11	15
Hapuku	7	1	19	31	12

During 1949 a total of 169 cwt. was line caught and 139 cwt. net caught, as compared with 214 cwt. by lines and 101 cwt. by nets during 1948.

Wanganui

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	528	631	214	363	311
Snapper	362	441	197	305	284
Hapuku	17	28	13	27	14
Blue cod	6	2	3	10	9

New Plymouth

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	2,301	2,643	2,792	3,255	3,527
Snapper	1,956	2,270	2,420	2,326	2,623
Hapuku	235	341	289	369	334
Tarakihi	..	1	..	181	187
Gurnard	15	4	7	211	124

During 1949 the total quantity taken by trawl was 2,169 cwt. and by line 1,358 cwt., as compared with 1,072 cwt. by trawl and 2,183 cwt. by line in 1948.

Kawhia

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	375	445	832	491	623
Snapper	115	208	486	196	355
Flounder	231	164	230	250	211
Pioke	4	30	36	19	28
Hapuku	2	29	28	11	23

During 1949 a total of 383 cwt. was line caught and 240 cwt. net caught, as compared with 200 cwt. and 291 cwt. respectively in 1948.

Raglan

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	163	124	212	646	934
Snapper	31	53	132	455	717
Flounder	131	71	67	164	196

In 1949 line-caught fish amounted to 716 cwt. and net-caught fish to 218 cwt., as compared with 470 cwt. and 176 cwt. for lines and nets respectively last year.

Manukau

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	1,229	1,215	1,401	902	1,046
Flounder	433	442	362	339	381
Mullet	505	472	452	331	311
Snapper	172	185	490	173	274

In 1948, 16 cwt. landed by a single Danish-seiner operating from Port Waikato was included in Manukau landings, but will in future be included under Raglan. The totals for 1949 amount to 779 cwt. by nets and 267 cwt. by lines, as compared with 730 cwt. by nets, 156 cwt. by lines, and 16 cwt. by Danish-seine in 1948.

Kaipara

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	2,220	3,608	3,792	3,088	2,930
Flounder	1,485	1,430	1,927	1,992	1,861
Snapper	259	1,020	770	314	382
Mullet	417	767	612	557	305
Shark	15	292	231	190	199

A total of 2,521 cwt. was net caught and 409 cwt. line caught in 1949, as compared with 2,670 cwt. by nets and 418 cwt. by lines in 1948.

Hokianga

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	941	575	634	574	377
Mullet	714	454	572	464	271
Snapper	108	66	21	17	48
Flounder	119	36	38	42	36

SOUTH ISLAND

Golden Bay

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	761	1,268	618	190	178
Snapper	482	471	383	145	121
Hapuku	67	12	63	31	42
Blue cod	71	26	13	11	15

Motueka

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	1,097	1,653	4,918	6,050	3,138
Snapper	741	806	2,350	3,319	1,743
Gurnard	104	221	687	987	761
Tarakihi	..	..	815	1,108	231
Pioke	..	25	331	350	171
Flounder	55	62	47	71	132

The steam-trawler operated only two months this year, as against twelve months last year, and landed 433 cwt. in 1949, as against 2,779 cwt. in 1948. Motor-trawl landed 2,431 cwt. in 1949, as against 2,720 cwt. in 1948, and other methods 274 cwt. in 1949, as against 551 cwt. in 1948.

Nelson

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	6,372	7,078	10,040	11,314	14,069
Snapper	2,034	2,974	6,053	6,530	6,391
Gurnard	2,081	2,012	1,905	3,278	5,768
Flounder	870	893	305	352	1,141
Pioke	223	268	462	468	376

The increase in this year's total occurs principally in the species gurnard, flounder, and sole. The motor-trawlers landed a total of 13,650 cwt. this year, as compared with 10,683 cwt. in 1948, while catch by motor lines totalled 415 cwt. and other methods 4 cwt., as compared with 623 cwt. and 8 cwt. respectively in 1948.

French Pass

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	3,278	2,749	3,293	2,111	2,442
Hapuku	554	507	399	624	841
Blue cod	1,751	1,353	1,976	968	825
Snapper	287	126	109	193	269
Butterfish	225	209	254	57	232

The principal methods—motor lines and motor nets— landed 2,124 cwt. and 318 cwt. respectively, as compared with 1,845 cwt. and 120 cwt. for these methods in 1948.

Havelock

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	1,701	1,968	2,781	3,353	3,197
Hapuku	56	105	359	385	866
Snapper	48	155	229	336	676
Blue cod	391	628	638	413	417
Shark	..	51	106	239	333
Flounder	783	388	260	370	273

The landings by trawl, lines, and nets in 1949 were 714 cwt., 2,250 cwt., and 233 cwt. respectively, as compared with 737 cwt., 1,421 cwt., and 1,195 cwt. for these methods last year.

Picton

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	4,358	4,913	3,774	3,267	3,817
Hapuku	1,947	2,153	2,431	2,516	3,035
Blue cod	293	170	205	251	302
Shark	164	290	197	170	210
Butterfish	148	49	158	123	99

During 1949 the quantity caught by lines was 3,696 cwt. and by nets 121 cwt., as compared with 3,093 cwt. and 143 cwt. respectively for these methods last year.

Blenheim

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	716	1,215	1,293	1,575	1,691
Moki	35	8	8	472	378
Mackerel	..	..	..	80	357
Tarakihi	49	30	7	66	246
Ling	35	14	..	122	183
Soles	201	139	240	182	177
Flounder	94	140	242	157	149

The quantity landed by trawl was 1,315 cwt., by lines 4 cwt., and by nets 372 cwt. in 1949, as compared with 1,429 cwt., 44 cwt., 102 cwt. respectively for these methods last year.

Kaikoura

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	1,960	2,703	3,870	3,171	2,895
Ling	1,099	1,170	1,936	1,538	1,356
Hapuku	535	1,078	1,599	1,182	1,034
Tarakihi	58	41	42	150	219

During 1949 the quantity landed by trawl was 383 cwt., by lines 2,457 cwt., and by nets 55 cwt., as compared with 249 cwt., 2,824 cwt., 98 cwt. for trawl, lines, and nets irespectively in 1948. The slight decrease in the quantity landed is probably due to more intensive crayfishing in this area.

Lyttelton

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	11,430	15,400	17,387	12,520	15,223
Tarakihi	4,840	7,094	8,895	6,101	7,469
Elephant-fish	1,632	1,805	1,413	1,016	2,028
Ling	1,447	2,133	2,278	1,539	1,997
Gurnard	1,203	1,269	1,105	895	1,328

Motor-trawlers accounted for 15,075 cwt., as compared with 11,888 cwt. last year. The totals for lines and nets were 18 cwt. and 130 cwt. respectively, as compared with 38 cwt. and 114 cwt. for these methods last year.

Akaroa

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	1,433	2,394	5,136	7,159	4,017
Hapuku	164	500	1,104	1,109	1,045
Elephant-fish	38	74	275	482	998
Ling	193	312	800	989	535
Gurnard	431	531	426	759	486
Tarakihi	193	206	1,053	1,274	459

The quantities caught during 1949 were trawl 2,847 cwt., lines 1,161 cwt., and nets 9 cwt., as compared with trawl 6,012 cwt., lines 1,107 cwt., and nets 40 cwt. last year.

Lake Ellesmere

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	764	480	940	2,810	2,335
Flounder	762	477	938	2,810	2,335
Herring	2	3	2	..	..

Timaru

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	11,386	21,223	21,216	20,661	19,403
Hapuku	1,275	2,796	2,560	3,416	3,763
Ling	1,047	3,136	3,817	3,459	3,672
Elephant-fish	2,155	2,445	1,714	2,938	2,626
Flounder	1,819	2,367	4,318	3,486	2,503
Tarakihi	44	118	47	341	2,255
Gurnard	1,879	2,946	2,051	2,244	2,253

During 1949 the motor-trawlers landed a total of 15,334 cwt., as against 15,073 cwt. in 1948. The line boats landed a total of 4,069 cwt. in 1949, as compared with 5,588 cwt. last year.

Oamaru

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	1,860	2,020	3,646	3,389	3,402
Hapuku	1,548	1,840	3,126	2,851	2,642
Blue cod	170	138	414	490	356
Gurnard	..	1	..	..	119
Tarakihi	..	5	..	1	102

A motor-trawler which commenced operations in 1948 and landed a total of 6 cwt. fished for eight months in 1949 and landed a total of 369 cwt., otherwise the fish at this port is all line caught.

Moeraki

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	2,017	1,964	2,499	1,580	2,372
Blue cod	549	383	736	617	1,243
Hapuku	1,336	1,352	1,565	846	1,053

During 1949, 2,365 cwt. was taken by lines and 7 cwt. taken by nets, as compared with 1,502 cwt. by lines and 65 cwt. by nets in 1948, during which a single motor-trawler also landed 13 cwt.

Karitane

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	1,186	1,153	1,361	589	468
Blue cod	197	279	211	242	171
Barracouta	797	429	391	177	138
Hapuku	150	158	161	119	80
Soles	1	..	169	33	46

During 1949 the quantities caught by trawl were 71 cwt., lines 396 cwt., and nets 1 cwt., as compared with trawl 34 cwt. and lines 555 cwt. last year.

Port Chalmers

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	25,533	23,250	44,849	38,460	41,359
Barracouta	7,502	8,171	13,938	11,262	11,027
Soles	6,282	8,366	10,963	9,652	10,648
Tarakihi	173	81	9,977	8,476	9,566
Red cod	7,605	3,846	2,536	1,304	1,708
Hapuku	829	562	1,418	1,124	1,394

The one steam-trawler landed 16,043 cwt., as compared with 15,827 cwt. last year, while the motor-trawlers landed 15,106 cwt. in 1949, as against 12,693 cwt. in 1948. The totals for lines and nets were 10,185 cwt. and 25 cwt. in 1949, as against 9,938 cwt. for lines and 2 cwt. for nets in 1948.

Taieri Mouth

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	714	989	669	732	1,279
Soles	559	849	389	183	638
Hapuku	82	83	230	390	486
Blue cod	70	42	50	152	110

During 1949 the quantities caught by trawl were 681 cwt., by lines 596 cwt., and by nets 2 cwt., as against trawl 188 cwt., and lines 544 cwt. in 1948.

Nuggets

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	4,250	4,565	6,177	4,091	3,863
Soles	3,838	3,528	4,258	2,994	2,935
Flounder	214	427	644	283	351
Hapuku	94	290	333	362	297
Blue cod	45	111	232	113	108

During 1949 the trawl caught fish amounted to 3,458 cwt. and the line caught fish to 405 cwt., as against 3,619 cwt. and 472 cwt. respectively in 1948.

Waikawa

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	2,610	2,964	4,456	4,214	4,948
Soles	2,320	2,818	3,608	2,931	3,999
Blue cod	121	55	526	734	420
Hapuku	36	24	229	475	385
Flounder	94	22	12	29	98

The 1949 trawl catch was 4,138 cwt., as against 3,004 cwt. last year, while line caught fish totalled 810 cwt. in 1949 and 1,210 cwt. in 1948.

Bluff and Stewart Island

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	13,649	15,161	19,523	17,638	19,197
Blue cod	12,193	13,222	17,054	15,112	16,670
Hapuku	568	769	1,117	1,024	1,049
Soles	..	135	237	267	886
Gurnard	..	13	3	29	126
Butterfish	6	51	64	295	92

The totals for the various methods were trawl 1,092 cwt., lines 18,000 cwt., and nets 105 cwt. in 1949, as against trawl 349 cwt., lines 16,941 cwt., and nets 348 cwt. last year.

Riverton (Including Invercargill)

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	580	688	907	662	857
Blue cod	468	597	783	574	758
Hapuku	88	83	117	69	69
Flounder	23	6	5	16	30

The quantities taken by the various methods were lines 827 cwt. and nets 30 cwt., as against lines 645 cwt. and nets 17 cwt. last year.

Greymouth

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	651	909	2,498	3,818	3,364
Hapuku	16	376	394	606	1,119
Soles	498	327	912	1,244	897
Gurnard	73	85	448	606	375
Tarakihi	..	5	4	3	268

The quantities caught by steam-trawl, motor-trawl and lines amounted to 1,027 cwt., 1,186 cwt., and 1,151 cwt. during 1949, as compared with steam-trawl 1,478 cwt., motor-trawl 1,718 cwt., and lines 622 cwt. last year. The steam-trawlers here are of a smaller class than those in other ports.

Westport

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	738	527	2,346	2,368	2,791
Soles	414	52	17	676	825
Tarakihi	8	1	579	741	773
Gurnard	126	112	363	293	614

The quantities taken by the methods were trawl 2,736 cwt. and lines 55 cwt. during 1949, as against trawl 2,251 cwt. and lines 114 cwt. last year.

Chatham Islands

	1945. Cwt.	1946. Cwt.	1947. Cwt.	1948. Cwt.	1949. Cwt.
Total quantity landed ..	2,078	3,586	9,412	12,490	7,816
Blue cod	2,011	3,442	9,246	12,265	7,676
Hapuku	67	144	166	225	140

The decrease in the total quantity landed is probably due to the vessel "Manuka" making only five trips in 1949, as against eight trips during 1948.

Exports and Imports

Imports of fish for the nine months ended 30th September, 1949, amounted to 15,449 cwt. of canned fish, such as herring, salmon, sardine, pilchard, and 353 cwt. of fish otherwise preserved, with a total value of £196,971.

The total value of fish and shell-fish exported during the twelve months of 1949 was £515,883, which represents an increase of £22,147 on the previous year's figure of £493,736.

The totals for the principal classes of fishery products exported for the last three years are given below :—

	Quantity.			Value.		
	1947.	1948.	1949.	1947.	1948.	1949.
				£	£	£
Oysters, fresh ..	950 doz.	1,020 doz.	1,920 doz.	27	30	107
Mussels	..	75 cwt.	93 cwt.	..	531	475
Fish, frozen ..	41,800 cwt.	54,671 cwt.	61,367 cwt.	235,079	340,441	366,880
Crayfish, frozen ..	2,335 cwt.	3,731 cwt.	6,388 cwt.	17,140	44,466	85,061
Fish, smoked, dried, &c.	4,384 cwt.	1,625 cwt.	1,047 cwt.	27,533	11,419	7,233
Fish and shell-fish (canned)	649,565 cwt.	755,307 cwt.	798,955 cwt.	78,439	96,849	56,127
Total values ..	..	..	..	358,218	493,736	515,883

A more detailed report of the quantities and kinds of fish and shell-fish is given in Table VII.

Big-game Fishing

The season for big-game fishing was generally a good one. Reasonably good fishing extended over the months from December to May. At several of the centres the secretary of the fishing club there has forwarded records of the catch during the season. The figures below show the numbers of the various species taken.

Species.	Bay of Islands.	Whangarei.	Tauranga.
Striped Marlin	278	10	513
Black Marlin	27	..	5
S.A. Blue Marlin	..	..	3
Mako Shark	40	41	44
Hammerhead Shark	5	..	..
Tiger Shark		..	7
Thresher	..	1	1
Blue	1	..	..

Sardines

The landings of sardines at Picton show a decrease over last year's figures.

The figures for the total sardine catch at Picton during the last five years are as follows :—

	Cwt.
1949	223
1948	896
1947	97
1946	1,191
1945	1,458

Fish-liver Oil

This branch of the industry shows an increase this year in quantity of livers handled and the quantity of oil produced, the figures being the highest yet recorded. The total weight of fish livers treated, 783,307 lb., an increase of 105,872 lb., and the fish-liver oil produced, 33,304 gallons, an increase of 9,221 gallons as compared with last year's figures.

A total of 18,747 gallons of fish-liver oil was exported, an increase of 1,035 gallons on last year's figures.

The total weights of livers treated and the quantities of oil produced during the last five years are as follows :—

Year.	Weight of Livers Treated. lb.	Quantity of Oil Produced. Gallons.
1945	564,397	25,023
1946	670,644	29,923
1947	698,383	30,427
1948	677,435	24,083
1949	783,307	33,304

Whaling

A total of 139 whales, all humpbacks, was taken during the season, the first whale being caught on 12th May and the last on the 20th August. During July, the best month, a total of 61 whales was taken. The total of 139 whales was made up of 87 males and 52 females.

The season proved to be a record one. This was attributed to more efficient plant that had been installed and to the excellent co-operation from the personnel. The whales were all in excellent condition, there was a noticeable absence of small whales, and another noteworthy feature of the season was the absence of any other species than the humpback whale.

The yield was 973 tons of oil, 100 tons of bonedust, and 300 tons of whale-meat (canned).

Rock Oysters

A total of 5,076 sacks was picked. The picking commenced on 16th May and finished on 2nd August.

The yield of oysters in sacks from each of the various areas was as follows : Bay of Islands, 2,409 ; Whangarei Harbour, 230 ; Coromandel, 450 ; Great Barrier Island, 202 ; Kaipara Harbour, 1,043 ; Hauraki Gulf, 742.

The quantities from Hauraki Gulf were obtained from the following areas : Tamaki Strait, 40 ; Ponui Island 478 ; Pakahi Island, 41 ; Waiheke Island, 183.

Oyster Cultivation for the Year Ended 31st March, 1950

Area.

IV. Takatu Point to Gull Point : 1,008,000 borers destroyed. Cost, £59 18s. 6d.

VII. Kawau Island : 76,000 borers destroyed. Cost, £5 2s.

X. Motutapu Island : 20,000 borers destroyed. Cost, £5 2s.

XIII. Waiheke Island : 100,900 borers destroyed. Cost, £8 7s. 3d.

XVI. Great Barrier Island : 1,406 square yards of rock cleared of grape weed ; 680 square yards of rock cleared of dead shell ; 2 square yards of high-water rock moved to lower level. Cost, £49 13s. 6d.

Total for all areas : 1,204,900 borers destroyed, 1,406 square yards of rock cleared of grape weed ; 680 square yards of rock cleared of dead shell ; 2 square yards of high-water rock moved to lower level. Cost, £128 3s. 3d.

Dredge Oysters : Foveaux Strait, 1949

With the slight increase of 2,892 sacks this year the total catch for the season reached the record figure of 97,336 sacks. This was due in part to the fact that the fleet of ten vessels worked throughout the season and that the weather was, on the whole, favourable. May was an exceptionally fine month, during which a total of 22,990 sacks were landed.

The table shown below sets out the production of oysters from the various beds. The figures are expressed in boxes, a measure used aboard the oyster boats. There are approximately two boxes to the sack. It will be seen from the table that the Saddle grounds, which are more distant from Bluff than the others, were scarcely worked at all.

Monthly and Total Production From the Various Beds, Expressed in Boxes

Month.	East.	Ruapuke.	Dog Island.	Bird Island.	West.	North Islands.	Stewart Island.	Saddle.	Totals.
February ..	5,466	4,539	..	2,083	374	..	..	..	12,462
March ..	15,267	3,376	912	2,385	8,328	..	..	..	30,268
April ..	7,332	..	..	1,690	17,324	..	..	..	26,346
May ..	11,196	2,818	158	6,042	20,870	..	135	..	41,219
June ..	1,448	..	..	322	11,500	1,538	802	328	15,938
July ..	132	..	..	..	17,823	1,990	..	..	19,945
August ..	..	..	..	..	21,800	..	240	..	22,040
September ..	11,665	2,558	20	2,210	5,398	..	..	..	21,851
Totals ..	52,506	13,291	1,090	14,732	103,417	3,528	1,177	328	190,069

The total quantity of oysters produced during each of the last six years is set out below :—

Year.	Sacks.	Year.	Sacks.
1944	63,949	1947	81,518
1945	76,038	1948	94,444
1946	89,356	1949	97,336

Toheroa

Although a few toheroa reappeared on the Ninety-mile Beach, the beds there have shown no real signs of making any recovery. On most other toheroa beaches heavy abstractions by the public have had an adverse effect on the toheroa stocks. Fortunately, however, on some of the northern beaches there are indications that the spawning season had been better than usual.

As only one company is at present canning toheroa the production figures and value have not been published separately. This company did, however, enjoy a very successful canning season.

Mussels

The following is the mussel catch from respective areas this year :—

	Sacks.	£
Auckland	9,398	3,289
Thames	3,408	1,022
Tauranga	2,013	589
Whakatane	26	12
	14,845	£4,912

The table below shows the catch of mussels over the last five years :—

——	1945.	1946.	1947.	1948.	1949.
Total quantity landed	Sacks. 13,156	Sacks. 10,568	Sacks. 16,261	Sacks. 14,414	Sacks. 14,845

WHITEBAIT FISHERY, 1949 SEASON

District.	Principal Rivers Fished for Which Returns Were Received.	Best Period.	Number of Fishermen (Approximately).		Total Quantity Caught (Approximately).
			Regular.	Casual.	
					Cwt.
Auckland ..	Waikato, Raglan, and Kawhia	Sept.–Oct.	130	65	949
Bay of Plenty ..	Kaituna, Tarawera, Rangitaiki, Waioeka, Otaro ..	Sept. ..	5	25	24
Hawke's Bay ..	Tukituki, Ngarororo, Porangahau	Sept.–Oct.	50	75	17
Wairarapa ..	Lake Onoke	Mid. Sept.	2	20	6
Wellington ..	Waikanae, Waimeha, Mangone, Otaki, Waiotohu, Ohau, Manawatu, Kaikokopu, Rangitikei	Oct. ..	86	382	266
Wanganui ..	Turakina, Whangaehu, Wanganui, Kai Iwi	Nov. ..	3	37	16
Patea ..	Waitotara, Whenuakura, Patea	Oct.–Nov.	54	170	90
Taranaki ..	Kaupokonui, Ohawe, Tangahoe, Waitara, Mokau, Waiongona, Awakino, Waiwakaiho, Uremui, Te Henui	Sept.–Oct.	18	257	33½
Marlborough ..	Wairau, Omaka, Opawa, Aorere, Takaka, Motupipi, Motueka, Moutere	Oct. ..	19	22	90½
North Canterbury	Waiau, Conway, Hurunui, Waipara	Oct.–Nov.	..	..	21
Christchurch ..	Saltwater, Ashley, Waimakariri, Avon	Oct.–Nov.	150	250	413
South Canterbury	Rakaia, Orari, Opihi, Ashburton, Rangitata, Waitaki (north bank)	Oct.–Nov.	..	..	157
Otago ..	Molyneux, Puerua, Taieri, Waipori, Kakanui, Shag, Waikouaiti, Tokomairiro, Tahakopa, Maclennan, Owaka, Catlins, Tautuku, Pleasant, Wainakarua, Waitaki (south bank)	Oct.–Nov.	20	82	98¾
Southland ..	Matawa, Titiroa, Oreti, Waihopai, Waimatuku, Aparima, Waiau, Big Bay (south-west coast)	Oct. ..	47	..	408½
West Coast—Wataroa	Maori, Haast, Karangarua, Okura, Waiotahi, Turnbull, Cascade, Fox, Jacobs, Mahitahi, Parenga, Blue, Big Wanganui, Poerua, Wataroa	Nov. ..	165	20	3,046
Hokitika ..	Hokitika, Mahinapua, Arahura, Totara (Ross) ..	Nov. ..	126	247	671
Greymouth ..	Grey, New, Teremakau, Paroa	Nov. ..	47	450	277
Westport ..	Karamea, Little Wanganui, Mohikinui, Ourawhaiti, Buller, Totara	Nov. ..	79	850	1,316
					7,899¾

After a disappointing season last year this season showed considerable improvement in most places.

The estimated total, 7,899 cwt., also reflects a more complete record than was received last year, and for this reason cannot be used as an exact quantitative comparison with last year's total of 4,517 cwt.

QUINNAT SALMON

Although there was a drop in the number of fish taken as compared with the last two years, the season was a reasonably good one. During this season three nets, one of which was operated for only one month, took 582 fish, as compared with 849 fish last year and 983 fish the year before.

CANNED FISHERY PRODUCTS

A small quantity of fishery products are canned. These include toheroa, mussels, crayfish, trevally, herring, pilchard, whitebait, barracouta, and whalemeat.

The quantity canned is set out below :—

	lb.
Shell-fish	81,360
Whitebait	116,730
Sea fish generally	579,968
Whale-meat	583,210
Fishery products unspecified	80,820
Total	1,442,088

Fresh-water Fisheries

Fresh-water Fisheries Advisory Council.—This representative body continues to achieve its major functions of (1) co-ordinating, harmoniously, the administrative practices of the Marine Department and of the local fisheries authorities—acclimatization societies and the Department of Internal Affairs; (2) stimulating interest in fisheries research and confidence in the conduct of this work. Since its establishment no significant changes have been made by the Department in administration or research without prior consultation.

Legislation and General Regulations.—No changes were made in Part II (fresh water) of the Fisheries Act, 1908, during the year. A long-overdue consolidation and revision of the general fresh-water fisheries regulations has been carried out, and it is expected that the new regulations will come into force before the 1950-51 angling season. Substantial assistance was given by members of the Advisory Council in framing the new regulations, and all important proposed changes have been adequately considered by acclimatization societies. In drafting the new regulations a great deal of matter has been drawn from existing local regulations in acclimatization society and Internal Affairs districts. This was necessary to clear the way for the revocation of most existing local regulations and their reissue in simpler form.

In advance of consolidation certain urgent matters were dealt with by a further amendment. These were (1) the increase, at the request of the South Island Council of Acclimatization Societies, of licence fees to bring them into line with those in the North Island; (2) machinery changes, pursuant to the amending Act of 1948, to simplify greatly the procedure required for altering local regulations. The change in South Island fees was sought so that additional funds could be used for special purposes—namely, staff training and reinforcement of staff services in weaker districts.

Local Regulations.—Under the new and simplified procedure, a single, concise, regional set of local by-laws has been issued to replace separate Orders in Council relating to the Wanganui, Hawera, Stratford, and Taranaki acclimatization districts. This was done by ministerial notification in the *Gazette* under the new power of approving local modifications of general regulations in a restricted and relatively unimportant class of matters. It is proposed progressively to replace all existing district regulations in this manner. A great saving in time in this Department, the Crown Law Office, the Printing Office, and the Legislative Department will result. Further, a body of law hitherto contained in upward of sixty separate documents comprising over 160 pages will be reduced to a concise and more intelligible series of statements in relatively few documents. The co-operation of acclimatization societies has been sought very successfully in reducing the frequency of demands for amendment of local regulations, which too often related to matters of very little substance.

Local Administration.—What may be the most important changes in the history of administration of fisheries by acclimatization societies are developing well and along lines strongly supported by this Department. Basic weaknesses hitherto have been (1) wide divergence of policy between different organizations, (2) absence of a sufficiently factual basis for policy, (3) great differences in revenue, relative to responsibilities, of different societies, (4) absence of any system for technical training of fisheries staff. The first two weaknesses are being progressively overcome through the work of the Fresh-water Fisheries Advisory Council and of the two Island Councils of Societies. A solution of the other two difficulties is well advanced in the South Island, where it is proposed to create a pool fund from licence revenue to meet the cost of technical training, regional reinforcement of staff services, and also superannuation (or alternative) staff security benefits. Staff training in fisheries work has been given during the last two years at the Fisheries Laboratory to junior officers of the Department of Internal Affairs who will later replace older retiring men in the Taupo, Rotorua, and Southern Lakes districts.

It is hoped shortly to give similar training (on a contributory basis, as regards costs) to junior officers of the South Island Societies, and later to extend this training, if asked for, to the remaining North Island districts.

Fish-pass Regulations.—These regulations are chiefly useful in ensuring advance consideration of fisheries interests when the damming of any stream is proposed. The most important project considered during the year was the proposed damming of the Hinemaia River to provide electric power for Taupo. Because a thorough survey showed that the proposed dam would be constructed near where natural falls prevent acsess of spawning trout from Lake Taupo, permission to proceed without building a fish-pass was granted.

While the Crown is not bound by such regulations, both the Hydro-electric Department and the Mines Department co-operate by ensuring advance consultation with fisheries officers in projects coming within their spheres.

Angling Access.—Attention is drawn to the fact that existing legislation does not prevent all alienation of lake shores and stream banks to which the public have often long enjoyed at least courtesy access. A serious weakness in the otherwise valuable provisions of the Land in Counties Subdivision Act, 1946, was the exception of Maori lands. Further, land not being subdivided or not in a county is unaffected. There are no satisfactory provisions in existing legislation for acquiring, for public use, land excluded from this Act. It seems desirable in the interests of the tourist trade and in the interests of the public generally, apart from anglers, that to the maximum extent feasible lake shores and river banks should become or remain public property.

Forestry holdings present a special problem. Their value is so great that it is unreasonable to expect State or private owners to jeopardize these holdings by permitting entry of anglers during dry periods. A partial solution might be to permit entry during a limited time at the opening of each angling season when, under normal weather conditions, the fire risk might be negligible. The only feasible long-term solution would appear to be the reservation, from forestry usages, of a reasonable width of land bordering streams and lakes.

Technical Advisory Services.—The reference to the Fisheries Branch of many technical problems of fisheries management by Acclimatization Societies, by the Department of Internal Affairs and, to a lesser extent, by private individuals continues. This advisory service is given by technical officers of the administrative staff and is not permitted to interfere with the work of the research staff. In practice it is found that most of the problems submitted can be answered satisfactorily on the basis of experience or from literature available in the Branch's well-stocked library. The maintenance of a good library, both for this purpose and for the use of the research staff, is essential. Since publication of fisheries bulletins was resumed following the war there has been a very big inflow of exchange literature and a gratifying extension of the list of institutions with which the Department exchanges technical publications.

Quinnat Salmon Fisheries.—The runs of quinnat salmon in all major east coast South Island snow rivers appear to be well maintained. In the last ten years or so this species has shown an increasing tendency to populate as well some of the lesser streams such as the Ashley and Ashburton. Early in 1949 reports from Westland suggested strongly that this species had spread by natural dispersion to the Taramakau River, between Hokitika and Greymouth. It has been arranged for observations to be made by a biologist.

This species of salmon was originally introduced at the expense of the public. It was established first in the Waitaki River, whence it has spread to other waters. Runs have never developed sufficiently to justify the original hopes that a substantial canning industry might be developed. The practice has been to permit any holders of angling

licences to fish for salmon without additional charge. A limited amount of commercial exploitation has been permitted by a few nets operating on week-days only in a very restricted portion of the Waimakariri estuary. Further, a small number of special licences have been issued to permit the sale of rod-caught fish. The Department is not entirely happy about some aspects of competitive angling between the few who hold selling licences and the great majority who do not. It would prefer to restrict commercial exploitation to netting. It seems proper that there should be a certain amount of commercial exploitation, as a species established at the expense of the general taxpayer should be made available to the public generally and not only to the restricted portion of the public who happen to be anglers.

During the 1950 run experimental netting is being carried out by the Department in and below the tail-race from the Highbank Power Station on the Rakaia River. Fish which enter this water have no reasonable opportunity of spawning and become highly vulnerable to poaching when they are left in an almost stranded condition by the periodical cutting off of the water-supply for maintenance routines at the power-house. Experiments in progress aim at "salvaging" many of the fish from the race, their transfer to the main river, and the marketing of a proportion of sound fish to cover expenses in this work. The Department is not committed at this stage to any long-term plans at Highbank, but is anxious to find a second source of commercial supplies in the hope that an increase would lead to a reduction of the present high market price of salmon.

Fresh-water Research

Although the continued impossibility of obtaining further permanent scientific staff has prevented any expansion of the research programme into the many other fields calling urgently for investigation, active progress has been continued along the lines mentioned in previous annual reports.

Lake Surveys.—As part of a programme designed to determine the possibility of establishing new species of game fish in those New Zealand waters which have proved unsuitable for trout, the survey of the lakes of the west coast of the North Island has been continued. Last year a number of the lakes in the series between Otaki and Hawera were surveyed, and this has been followed in the present year by a survey of representative lakes between the Waikato and North Cape. In addition to six officers from the Fisheries Laboratory, the survey team this year included scientists from the Botany Division of the Department of Scientific and Industrial Research and from the Wildlife Branch of the Department of Internal Affairs. It has thus been possible to gain more complete data regarding the botanical and wild-fowl aspects of the lakes studied, and the information obtained from the correlation of the results will prove valuable to all the Departments concerned.

In both areas it has been found that some of the lakes are unsuitable for the introduction of any species of game fish. This is commonly due to one or more of the following causes: too shallow, excessive weed growth, encroachment by swampy banks or shifting sand, or unfavourable chemical conditions (generally absence of sufficient oxygen). There are, however, many lakes which show no obvious adverse features, and it is intended that the next step should be a close study of typical representatives of these throughout the year. This will not only reveal whether unfavourable conditions develop at any time other than late summer (when the surveys have been made), but it will also show the extent of the annual variation in such factors as temperatures. When these further studies have been completed it may be possible to select from among the game fish known in other parts of the world one which requires a habitat similar in all essentials to that offered by the west coast lakes; such a fish could then be introduced with good chances of success.

Eels.—Investigation of eel populations has now been carried out in the Southland, Wellington, and Waikato districts. The work done in the Wellington district has been the most intensive and has provided valuable information on the feeding habits of eels in a fairly typical shingle river.

A comparison of results from the various areas has shown that in rivers of the same type the density of the eel population is generally similar. In rivers of differing types the population density appears to be determined by the amount of cover present for the eels. The amount of cover varies from a minimum in open shifting shingle-bed streams to a maximum in stable heavily-weeded streams with deep holes and overhanging banks. The corresponding range in the density of the population of trappable eels is from 15–20 lb. per acre of water to over 1,000 lb. per acre.

The constitution of the trappable population—*i.e.*, its size distribution—has been almost identical in all regions and in all types of river.

Some information has been collected on the feeding habits of the smaller, free-swimming eels which do not enter a baited trap. The feeding habits have been found to show significant differences which are correlated with size. Fish-eating tendencies begin to appear in the 24–28 in. size range. Associated with this is a tendency to feed less frequently, and there is also a marked change in the preferences which the eels show for the various groups of the insect fauna.

At present the qualitative aspects of the feeding habits of the free-swimming eels of all sizes are being worked out, but it is hoped that later a quantitative study will be possible. For this, and several other problems the present methods of trapping eels are unsatisfactory, and consideration is being given to the development of more efficient methods.

Angling Records.—The anglers' diary scheme which had been inaugurated in 1947–48 was continued in 1948–49. An increasing number of acclimatization societies showed active interest in the scheme, and in nearly all cases those societies which had operated in the previous year showed an increased response in 1948–49. It is gratifying to record that two societies—Nelson and Waimarino—were able to obtain diaries from more than one-fifth of their anglers. Where co-operation on this scale is available, reliable data can be obtained regarding the state of the fish stock in the principal waters, and it also becomes possible to make some estimate of the quantity of fish which anglers are taking. Owing to the doubt which must exist as to how far the diarists are typical of all anglers it will, however, be necessary to obtain diaries from an ever greater proportion of anglers if information on this highly important point is to be really reliable.

The total number of diaries received through the thirteen acclimatization societies which took part in the diary scheme was 304. This is a substantial improvement on the previous year, although it still represents less than 2 per cent. of the New Zealand anglers. These records provided some data regarding the state of the stocks in 125 of the major rivers and lakes. It has also become possible for the first time to get an approximate idea of the number of trout which are taken in New Zealand in the course of a season; it appears that this is about 650,000 fish.

Similar data regarding angling catches in the Rotorua, Taupo, and Southern Lakes districts has been collected by field officers of the Department of Internal Affairs and analysed at the Fisheries Laboratory. The quantity of data obtained from these districts also shows a decided improvement over the previous season.

On several occasions during the year use has been made of information gained through the diary scheme to determine the probable effect of proposed changes in district regulations, and decisions have been made in accordance with these findings.

Horokiwi Investigation.—Analysis of the results of the detailed studies made on this stream in 1939–42 have been continued and the manuscript is now well advanced for publication.

During the year a circular was prepared showing the results obtained from the studies of ten years of anglers' diaries from this stream. The results indicated clearly that in this very typical small trout stream, natural phenomena such as floods had been of very much greater importance than liberations in determining the size of the stock.

Erosion and Flooding.—Progress has been made with the analysis of the results of the studies made in 1947 on the effects of floods and the shifting of river-beds on the bottom fauna. It is hoped that the results will be published during the coming year.

Fiordland Expedition.—The data collected by the fisheries officers who accompanied the above expedition have been analysed and the results will be published with the other reports on the expedition.

No trout or other introduced fish were found in the area, and native fresh-water fish were not abundant, although eels and bullies were recorded, as well as several species of *Galaxias*.

Publications.—Although no Fisheries Bulletins or other major publications have appeared during the year a number of technical and research articles have been published by members of the staff in various journals. These include "Migrating Eels in Lake Ellesmere," by D. F. Hobbs, and "Some Aspects of the Production and Cropping of Fresh Waters," by K. R. Allen in "Proceedings of New Zealand Science Congress, 1947"; "The New Zealand Grayling," by K. R. Allen, and "Problems of Marine and Fresh-water Fisheries Biology in New Zealand," by K. R. Allen and R. M. Cassie in *Tuatara*, and "Lakes," by K. R. Allen in *New Zealand Science Review*.

Marine Research

Work has continued on the two major lines of research commenced last year—namely, trawl mesh selectivity and toheroa population studies. In addition, the detailed analysis of catches from selected boats in the Nelson area has been continued. During the year a systematic plankton sampling programme in the Hauraki Gulf and adjacent waters was commenced in co-operation with Mr. A. S. Fuller, of the Zoology Department of the Auckland University College. The Marine Biologist also made fishing trips on trawlers from Gisborne and Dunedin to make a preliminary acquaintance with these fisheries and their problems.

Sufficient experimental trawling by the research vessel "Ikatere" has now been completed to produce some reasonably conclusive data, suggesting that at least in Hauraki Gulf the optimum mesh size of cod-ends for snapper is nearer 5 in. than the present legal minimum of 4 in. As time has permitted trawl catches have been subjected to biological examination, yielding valuable statistics for several species of fish.

Further surveys of the toheroa populations have been made on the Muriwai and Waiterere beaches, but this data is still being statistically examined.

The naval survey vessel H.M.N.Z.S. "Lachlan," at present engaged in the work of surveying and recharting the coastal waters, has already made special contributions. In January, 1950, the Marine Biologist was privileged to accompany H.M.N.Z.S. "Lachlan" on a special survey of the Mernoo Bank bearing 080° and distant some 95 miles from Godley Head. A committee set up to formulate and handle the biological and oceanographic collections which are being made in the course of the survey work has already received several consignments of material.

The Seventh Pacific Science Congress held at Auckland and Christchurch during 1949 permitted a valuable interchange of views with leading overseas fisheries scientists.

Legislation

Pursuant to the Fisheries Act, 1908, the following regulations were enacted during the year:

(1) The Fresh Water Fisheries Regulations 1936, Amendment No. 7 (Serial No. 1949/146).

(2) The Fresh Water Fisheries (North Canterbury) Regulations 1946, Amendment No. 2 (Serial No. 1949/147).

(3) The Fresh Water Fisheries (Hawera, Stratford, Taranaki, and Wanganui) (Revocation) Regulations 1950 (Serial No. 1950/10).

(4) The Fresh Water Fisheries (Hawera, Stratford, Taranaki, and Wanganui) Modification Notice 1950. (Serial No. 1950/11).

Pursuant to the Whaling Industry Act, 1935, the following regulations were enacted during the year:—

(1) The Whaling Industry Regulations, 1949 (Serial No. 1949/149).

There were no amendments to the Act itself, nor were there any amendments to the Sea Fisheries Regulations.

Staff

Additions to the field staff during the year consisted of the appointment of Inspectors of Fisheries in the new sub-districts of Nelson–Marlborough and the West Coast. For the laboratory we were fortunate in obtaining the services of a qualified research assistant to help the Marine Biologist with the laboratory and analytical work. Other appointments were all in the nature of transfers or replacements of staff who had resigned or retired.

Appendix

The appendix to this report sets out the grouping of the various fishing ports as used in this report.

M. W. YOUNG,

Chief Inspector of Fisheries.

APPENDIX No. 1

The grouping of the individual ports of landing of the fishing boats that forms the basis of the statistical data in the report is as follows:—

Reference Name of district.	Area Definition (Includes all Landing-places Between the Points Named).
North Island	
Mangonui	Reef Point via North Cape to Cape Surville.
Whangaroa	Cape Surville to Cape Wiwiki.
Bay of Islands	Cape Wiwiki to Cape Brett.
Whangarei	Cape Brett to Cape Rodney.
Auckland	Cape Rodney to Orere Point.
Thames	Orere Point to Deadman's Point.
Coromandel	Deadman's Point to Cape Colville.
Mercury Bay	Cape Colville to Te Ho Point.
Tauranga	Te Ho Point to Tarawera River.
Whakatane	Tarawera River to East Cape.
Gisborne	East Cape to Portland Island.
Napier	Portland Island to Cape Turnagain.
Castle Point	Cape Turnagain to Cape Turakirae.
Wellington	Cape Turakirae to Cape Terawhiti.
Makara	Cape Terawhiti to Bridge Pah.
Paremata	Bridge Pah to Paekakariki.
Paraparaumu	Paekakariki to Waitarere.
Manawatu	Waitarere to Turakina.
Wanganui	Turakina to Manutahi.
New Plymouth	Manutahi to Tirua Point.
Kawhia	Tirua Point to Waipapa Point.
Raglan	Waipapa Point to Warahu.
Manukau	Warahu to Muriwai.
Kaipara	Muriwai to Mangonui Bluff.
Hokianga	Mangonui Bluff to Reef Point.
South Island	
Golden Bay	Kahurangi Point to Separation Point.
Motueka	Separation Point to White Bluffs.
Nelson	White Bluffs to Cape Soucis.
French Pass	Cape Soucis to Cape Lambert.
Havelock	Boat Rock Point to Cape Lambert.
Picton	Cape Lambert to Robertson Point.
Blenheim	Robertson Point to Cape Campbell.
Kaikoura	Cape Campbell to and including Motunau.
Lyttelton	Motunau to and including Le Bons Bay.
Akaroa	Le Bons Bay to and including Taumutu.
Lake Ellesmere	Lake Ellesmere and Lake Forsyth.
Timaru	Taumutu to Waitaki River.
Oamaru	Waitaki River to Look Out Bluff.
Moeraki	Look Out Bluff to Red Cliff.
Karitane	Red Cliff to Potato Point.
Port Chalmers	Potato Point to Green Island.
Taieri Mouth	Green Island to Cooks Head.
Nuggets	Cooks Head to Chaslands Mistake.
Waikawa	Chaslands Mistake to and including Mataura River.
Bluff	Mataura River to Barracouta Head (including Stewart Island).
Riverton	Barracouta Head to Puysegor Point. Puysegor Point to Cascade Point.
Hokitika	Cascade Point to Taramakau River.
Greymouth	Taramakau River to Seal Island.
Westport	Seal Island to Kahurangi Point.
Chatham Islands	Chatham Islands.

MARINE FISH HATCHERY AND BIOLOGICAL STATION, PORTOBELLO

SIR,—

I have the honour to submit, for the information of the Hon. the Minister of Marine, a report on the Portobello Marine Fish Hatchery and Biological Station for the year ended 31st March, 1950.

This station was established nearly fifty years ago under section 65 of Part I of the Fisheries Act, 1908, which made provision for "the establishment of fish-breeding or fish-hatcheries," a form of enterprise which, so far as marine fish culture was concerned, had originated in America and Europe, its pioneers and advocates possessing more enthusiasm for undertakings of "practical" value than understanding of the actual biological conditions governing such matters. Experience has since shown the impracticability of such undertakings, and the development of marine biological science has provided an explanation of the reasons for their fruitlessness. In the case of the Portobello establishment the relatively enlightened outlook of the first Chairman of its Board of Management, the Hon. G. M. Thomson, resulted in the recognition of the value of this station as a means of providing for the study of marine life in addition to its primary object of artificial fish hatching and the acclimatization of exotic species in New Zealand waters. For many years our only knowledge regarding the life-histories of fishes and other forms of life in New Zealand seas was the result of researches carried out at Portobello. Results could have been greatly augmented but for the fact that the financial provision for staff and equipment has never been adequate for anything like the full use of the potential facilities available at Portobello. In this branch of science New Zealand's progress has been far behind that of other British Commonwealth nations and most other civilized countries. The most apparent reason for this is that the actual control, by way of financial appropriations, of work that could be done at Portobello has been subject to the annual estimates of a department the interests and functions of which were statutorily based mainly on the administrative tasks connected with the operations of the fishing industry. The fact that effective and permanently beneficial administrative control of the fishing industry must be based on a scientific understanding of conditions of life in the sea has been all too slow in receiving recognition.

During the last twenty-five years in which fishery investigational work has been undertaken, quite appropriately and indeed inevitably (though not as extensively as was desirable), by the Marine Department the only work carried on at Portobello that has advanced scientific knowledge of sea life has been done by members of the staff and research students of Otago University or by occasional visitors from other University colleges or from overseas. The transference of the administration of the Portobello Station to an authority that is responsible for the furtherance of scientific research that is fundamental or general, as distinct from investigations for immediately practical purposes, is a development that would appear to be logical and appropriate at this stage. For this reason the Board is in favour of the proposal to hand over the Station into the charge of the University of Otago, whose members of staff have borne a considerable share in the duties of management as well as carrying out noteworthy research work through many difficult years. It is understood that steps to this end are now in train.

During the past year much use has been made of the Station by the Botany and Zoology Departments of the University, and in August, 1949, a short marine course was held for students. Dr. Margaret Naylor, marine algologist from England, who is temporarily a member of the Botany Department, has been the only overseas visitor.

Thanks to a generous grant from the University of Otago, much needed repairs to the aquarium building and one of the dwellings have been carried out. The Board is pleased to report that the station is now in a better condition than has been the case for several years.

I have, &c.,

A. E. HEFFORD,

Chairman of the Board.

TABLE I—SHOWING APPROXIMATELY THE TOTAL QUANTITIES OF FISH AND SHELL-FISH LANDED AT THE VARIOUS PORTS FOR THE YEAR ENDED 31ST DECEMBER, 1949

Name of Port or District.	Quantity Landed (Fish).	Total Value (Fish).	Shell-fishery (Excluding Toheroa).							Grand Total Value.
			Oysters.	Value.	Mussels.	Value.	Crayfish.	Value.	Total Value (Shellfish).	
North Island	Cwt.	£	Sacks.	£	Sacks.	£	Cwt.	£	£	£
Mangonui	1,783	3,299	..	..	..	..	21	51	51	3,350
Whangaroa	1,058	1,836	..	..	..	..	951	2,164	2,164	4,000
Bay of Islands	3,955	6,879	..	..	..	..	1,018	2,339	2,339	9,218
Whangarei	5,247	8,193	..	..	..	..	61	169	169	8,362
Auckland	133,169	193,504	5,076	8,744	9,398	3,289	1,428	4,190	16,223	209,727
Thames	17,602	32,764	..	..	3,408	1,022	..	..	1,022	33,786
Coromandel	930	1,158	..	..	..	..	..	..	..	1,158
Mercury Bay	1,695	3,345	..	..	..	..	2,219	6,505	6,505	9,850
Tauranga	12,948	20,572	..	..	2,013	589	115	343	932	21,504
Whakatane	1,762	3,478	..	..	26	12	140	485	497	3,975
Gisborne	14,675	22,233	..	..	..	..	631	1,521	1,521	23,754
Napier	25,320	45,730	..	..	..	..	1,029	2,798	2,798	48,528
Castle Point	136	560	..	..	..	..	395	921	921	1,481
Wellington	50,617	114,554	..	..	..	..	3,464	9,990	9,990	124,544
Makara	468	1,238	..	..	..	..	268	714	714	1,952
Paremata	3,443	12,433	..	..	..	..	236	634	634	13,067
Paraparaumu	918	2,787	..	..	..	..	..	..	..	2,787
Manawatu	308	1,324	..	..	..	..	..	..	..	1,324
Wanganui	311	776	..	..	..	..	..	..	..	776
New Plymouth	3,527	8,388	..	..	..	..	224	658	658	9,046
Kawhia	623	1,981	..	..	..	..	..	..	..	1,981
Raglan	934	2,479	..	..	..	..	..	..	..	2,479
Manakau	1,046	2,530	..	..	..	..	24	55	55	2,585
Kaipara	2,930	9,691	..	..	..	..	..	..	..	9,691
Hokianga	377	639	..	..	..	..	..	..	..	639
South Island										
Golden Bay	178	386	..	..	..	..	19	44	44	430
Motueka	3,138	4,854	..	..	..	..	2	4	4	4,858
Nelson	14,069	23,863	..	..	..	..	126	296	296	24,159
French Pass	2,442	6,894	..	..	..	..	..	..	..	6,894
Havelock	3,197	7,633	..	..	..	..	1	1	1	7,634
Picton	3,817	11,226	..	..	..	..	3,050	7,749	7,749	18,975
Blenheim	1,691	2,770	..	..	..	..	685	1,755	1,755	4,525
Kaikoura	2,895	7,707	..	..	..	..	5,123	13,777	13,777	21,484
Lyttelton	15,223	33,679	..	..	..	..	1,330	4,607	4,607	38,286
Akaroa	4,017	10,592	..	..	..	..	3,232	10,877	10,877	21,469
Lake Ellesmere	2,335	8,731	..	..	..	..	..	..	..	8,731
Timaru	19,403	50,985	..	..	..	..	7	12	12	50,997
Oamaru	3,402	8,936	..	..	..	..	..	..	..	8,936
Moeraki	2,372	6,759	..	..	..	..	867	1,515	1,515	8,274
Karitane	468	1,130	..	..	..	..	2,772	3,435	3,435	4,565
Port Chalmers	41,359	65,264	..	..	..	..	1,351	3,930	3,930	69,194
Taieri Mouth	1,279	3,981	..	..	..	..	1,131	3,453	3,453	7,434
Nuggets	3,863	11,172	..	..	..	..	25	55	55	11,227
Waikawa	4,948	14,170	..	..	..	..	423	1,318	1,318	15,488
Bluff - Stewart Island	19,197	54,140	97,336	81,519	..	..	3,777	11,238	92,757	146,897
Riverton District	857	2,118	..	..	..	..	..	..	..	2,118
Hokitika	..	..	..	..	..	..	..	..	..	..
Greymouth	3,364	8,851	..	..	..	..	..	..	..	8,851
Westport	2,791	7,100	..	..	..	..	626	1,431	1,431	8,531
Chatham Islands	7,816	9,020	..	..	..	..	..	..	..	9,020
Totals	449,903	864,332	102,412	90,263	14,845	4,912	36,771	99,034	194,209	1,058,541

[This table becomes Table I for this year only.]

TABLE II—SHOWING THE NUMBER OF FISHING-VESSELS AND THE NUMBER OF FISHERMEN ENGAGED IN THE INDUSTRY AT EACH PORT OR DISTRICT FOR THE YEAR ENDED 31ST DECEMBER, 1949

Name of Port or District.	Vessels Licensed, 1st January, 1949, to 31st December, 1949.				Number of Fishermen Employed (Including Skipper).		Analysis of Methods of Fishing.															
							Vessels Engaged in Fishing for Wet Fish.										Vessels Engaged in Shell Fishery.					
							Motor-vessels Danish-seining.		Steam-trawlers.		Motor-trawlers.		Motor-vessels Set-nets, and Line-fishing.		Rowing-boats.		Oyster-dredging Vessels.		Mussel-dredging Vessels.		Crayfishing-vessels.	
	Total Numbers.	A.	B.	C.	Vessels in Group A.	Vessels in Group B.	Whole Time.	Part Time.	Whole Time.	Part Time.	Whole Time.	Part Time.	Whole Time.	Part Time.	Whole Time.	Part Time.	Whole Time.	Part Time.	Whole Time.	Part Time.	Whole Time.	Part Time.
North Island																						
Mangonui	24	7	7	10	11	23	..	..	..	..	..	..	7	13	..	2	..	..	..	..	..	2
Whangaroa	23	8	7	8	9	24	..	..	..	..	..	..	1	13	2	5	..	..	..	..	6	7
Bay of Islands	50	19	16	15	24	41	..	..	..	..	..	..	15	25	1	3	..	..	..	..	4	11
Whangarei	29	6	7	16	14	32	..	..	..	..	1	..	5	13	..	2	..	..	..	..	..	7
Auckland	170	68	32	70	221	146	32	3	3	..	12	..	18	59	..	12	..	..	1	1	6	22
Thames	51	23	8	20	60	34	..	..	..	..	..	..	22	15	..	10	..	..	1	..	..	..
Coromandel	12	1	6	5	1	14	..	..	..	..	..	..	1	4	..	5	..	..	..	..	..	..
Mercury Bay	37	12	8	7	20	34	..	..	..	..	..	..	5	15	..	1	..	..	..	..	11	11
Tauranga	49	10	15	24	28	58	..	1	..	..	3	..	7	26	..	3	..	..	1	4	..	12
Whakatane	15	5	4	6	8	21	..	..	..	..	1	..	3	6	2	1	..	..	..	1	1	2
Gisborne	24	11	4	9	26	26	..	..	..	..	7	1	4	4	..	..	..	..	..	..	1	11
Napier	40	26	4	10	61	26	..	..	..	..	17	3	4	12	..	1	..	..	..	..	6	20
Castle Point	5	1	2	2	2	7	..	..	..	..	..	..	1	3	..	..	..	..	..	..	1	3
Wellington	42	27	1	14	107	28	..	..	3	..	2	..	16	14	..	4	..	..	..	..	13	9
Makara	6	2	3	1	3	7	..	..	..	..	..	..	2	4	..	..	..	..	..	..	2	3
Paremata	17	7	4	6	14	15	..	..	..	..	..	..	6	8	..	..	..	..	..	..	1	2
Paraparaumu	10	2	..	8	2	9	..	..	..	..	..	..	2	5	..	1	..	..	..	..	..	..
Manawatu	16	2	4	10	4	17	..	..	..	..	..	..	1	1	1	11	..	..	..	..	..	..
Wanganui	15	1	5	9	1	21	..	..	..	..	..	..	1	11	..	..	..	..	..	..	..	..
New Plymouth	21	7	6	8	15	19	..	..	..	..	1	..	6	10	..	1	..	..	..	..	1	8
Kawhia	6	3	1	2	4	3	..	..	..	..	..	..	3	1	..	2	..	..	..	..	..	..
Raglan	12	3	6	3	4	13	..	..	..	..	..	..	3	5	..	3	..	..	..	..	..	..
Manakau	20	4	7	9	4	20	..	..	..	..	..	..	4	9	..	4	..	..	..	..	..	1
Kaipara	42	20	6	16	23	28	..	..	..	..	..	..	19	11	1	..	..	..	..	..	..	..
Hokianga	20	..	3	17	..	25	..	..	..	..	..	..	..	12	..	3	..	..	..	..	..	..

South Island																									
Golden Bay	..	..	..	4	1	1	2	1	4	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1
Motueka	..	..	..	8	4	2	2	12	6	..	..	1	..	2	..	1	3	..	..	..	..	..	..	..	3
Nelson	..	..	..	13	11	1	1	22	3	..	..	..	..	9	1	1	1	..	1	..	..	..	..	..	2
French Pass	..	..	..	31	10	7	14	16	35	..	..	..	..	..	..	10	19	..	..	..	..	..	..	..	..
Havelock	..	..	..	34	13	9	12	25	32	..	..	..	..	3	7	10	11	..	..	..	..	..	..	..	1
Picton ..	..	..	..	22	16	1	5	31	8	..	..	..	..	..	..	9	9	..	..	..	..	..	..	11	1
Blenheim	..	..	..	14	6	2	6	10	14	..	..	..	..	3	2	..	2	..	..	..	..	..	..	3	2
Kaikoura	..	..	..	39	28	4	7	36	14	..	..	..	..	1	2	15	6	..	1	..	..	..	..	27	5
Lyttelton	..	..	..	23	15	..	8	31	10	..	..	..	..	12	..	1	8	..	..	..	..	..	..	5	12
Akaroa	..	..	..	27	19	4	4	32	12	..	..	..	..	4	..	8	10	..	2	..	..	..	..	15	6
Lake Ellesmere	..	..	..	32	14	9	9	22	24	..	..	..	..	..	..	10	8	4	6	..	..	..	..	..	..
Timaru	..	..	..	30	29	1	..	58	4	..	..	..	..	19	4	13	2	..	..	..	..	..	..	..	2
Oamaru	..	..	..	16	12	3	1	22	5	..	..	..	..	1	..	11	3	..	..	..	..	..	..	..	..
Moeraki	..	..	..	15	15	..	..	22	..	..	..	..	..	..	..	13	1	..	..	..	..	..	..	3	4
Karitane	..	..	..	8	7	1	..	7	1	..	..	..	..	..	2	1	7	..	..	..	..	..	..	6	2
Port Chalmers	..	..	..	51	33	5	13	74	25	..	..	1	..	19	..	13	9	..	1	..	..	..	..	3	15
Taieri Mouth	..	..	..	8	7	..	1	11	1	..	..	..	..	3	1	4	2	..	..	..	..	..	..	7	1
Nuggets	..	..	..	16	10	1	5	18	10	..	..	..	..	8	1	3	5	..	..	..	..	..	..	..	8
Waikawa	..	..	..	15	8	5	2	14	13	..	..	..	..	6	1	1	7	..	..	..	..	..	..	1	4
Bluff - Stewart Island	..	..	..	94	68	6	20	169	70	..	..	..	..	2	2	60	14	..	..	10	..	..	..	23	40
Riverton District	..	..	..	11	4	3	4	8	14	..	..	..	..	..	..	4	5	..	1	..	..	..	..	..	..
Hokitika	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Greymouth	..	..	..	10	7	1	2	12	3	..	..	2	..	2	2	6	1	..	..	..	..	..	..	..	1
Westport	..	..	..	17	4	3	10	7	15	..	..	..	..	2	1	..	9	..	..	..	..	..	..	2	6
Chatham Islands	..	..	..	5	4	..	1	13	2	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..
Totals ..	..	..	..	1,289	620	235	434	1,339	1,016	32	4	8	..	142	30	355	442	11	86	10	..	3	6	159	247

A: Number of vessels whose catch for the year exceeded £200 gross. B: Number of vessels whose catch for the year exceeded £50 but did not exceed £200.
C: Number of vessels whose catch for the year did not exceed £50.
Whole time in any method is where the total catch for that method exceeds £200 value. A vessel may therefore be regarded as being whole time in more than one method of fishing. *Part time* in any method is where the total catch is positive but less than £200 in value.

[This table becomes Table II for this year only.]

TABLE III—SHOWING THE QUANTITIES OF DIFFERENT KINDS OF FISH CAUGHT BY THE DIFFERENT METHODS OF FISHING FOR THE YEAR ENDED 31ST DECEMBER, 1949

Fish.	Trawl.						Danish Seine.		Other Nets.					
	Steam.		Motor.		Total.		Motor.		Motor.		Row-boat.		Total.	
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Barracouta	3,553	1,788	126	159	3,679	1,947	..	..	3	4	2	1	5	5
Blue cod	7	19	52	144	59	163	8	24	..	..	1	1	9	25
Bonita *(Brama)*	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brill	15	43	147	505	162	548	..	..	..	..	..	..	..	..
Butterfish (Greenbone)	..	..	16	17	16	17	18	12	1,087	3,561	8	28	1,113	3,601
Conger-eel	..	..	6	5	6	5	..	..	6	6	..	..	6	6
Cream-fish	287	201	..	..	287	201	..	..	..	..	..	..	..	..
Elephant-fish	193	205	5,871	12,833	6,064	13,038	..	..	75	181	..	..	75	181
Flounders	46	126	6,976	25,207	7,022	25,333	39	135	9,581	34,619	1,110	4,480	10,730	39,234
Frost-fish	..	..	..	..	..	..	..	..	1	2	..	..	1	2
Garfish (piper)	..	..	..	..	..	..	8	35	108	303	..	..	116	338
Gurnard	2,122	1,584	18,308	19,858	20,430	21,442	3,444	2,421	785	548	2	2	4,231	2,971
Hake	475	1,284	635	1,687	1,110	2,971	..	..	..	..	..	..	..	..
Hapuku (groper)	979	3,081	2,779	9,455	3,758	12,536	164	430	7	14	..	..	171	444
Herrings	..	..	..	..	..	..	..	..	1,162	1,146	429	503	1,591	1,649
John-dory	304	460	1,726	2,634	2,030	3,094	..	..	..	..	..	..	..	..
Kahawai	4	3	75	55	79	58	12	8	315	271	4	6	331	285
Kingfish	..	..	52	72	52	72	8	6	30	44	1	1	39	51
Ling	718	1,243	5,253	9,891	5,971	11,134	..	..	1	1	..	..	1	1
Mackerel	153	157	1	1	154	158	..	..	378	217	..	..	378	217
Maomao	..	..	..	..	..	..	1	2	4	6	..	..	5	8
Moki	1,111	2,025	2,631	4,008	3,742	6,033	..	..	173	338	18	42	191	380
Mullet	..	..	..	..	..	..	..	..	1,815	3,161	146	224	1,961	3,385
Parori	..	..	..	..	..	..	..	..	141	192	4	6	145	198
Perch	30	23	6	4	36	27	..	..	..	..	..	..	..	..
Pioki	817	614	1,719	2,214	2,536	2,828	267	391	298	411	10	10	575	812
Red cod	534	432	2,275	2,079	2,809	2,511	..	..	2	4	..	..	2	4
Sardine	..	..	..	..	..	..	..	..	223	156	..	..	223	156
Shark	555	769	102	94	657	863	22	10	66	77	3	3	91	90
Skate	..	..	28	16	28	16	..	..	..	..	..	..	..	..
Snapper	22,893	34,949	27,772	46,205	50,670	81,154	54,011	81,887	11,281	17,696	218	425	65,510	100,008
Sole	396	1,099	24,281	73,397	24,677	74,496	1	7	3	7	..	..	4	14
Swordfish (marlin)	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tarakihi	45,021	81,565	59,565	101,917	104,586	183,482	5,841	8,773	25	48	3	4	5,869	8,825
Trevally	4,409	3,145	604	566	5,013	3,711	579	414	964	888	35	44	1,578	1,346
Trumpeter	4	13	10	28	14	41	..	..	..	..	..	..	..	..
Tuna	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Warehou	246	295	..	..	246	295	..	..	160	339	..	..	160	339
Whiptail	526	443	17	13	543	456	..	..	..	..	..	..	..	..
Whiting	91	70	..	..	91	70	..	..	..	..	..	..	..	..
Mixed flat fish	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mixed round fish and all fish not specified	2,486	760	643	605	3,129	1,365	868	623	331	399	4	6	1,203	1,028
Totals	87,980	136,396	161,676	313,669	249,656	450,065	65,291	95,178	29,025	64,639	1,998	5,786	96,314	165,603

TABLE III—SHOWING THE QUANTITIES OF DIFFERENT KINDS OF FISH CAUGHT BY THE DIFFERENT METHODS OF FISHING FOR THE YEAR ENDED 31ST DECEMBER, 1949—*continued*

Fish.	Lines.						Grand Total.	
	Motor.		Row-boat.		Total.			
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Barracouta	9,445	3,673	..	..	9,445	3,673	13,129	5,625
Blue cod	29,709	72,470	2	9	29,711	72,479	29,779	72,667
Bonita *(Brama)*	1	1	..	..	1	1	1	1
Brill	..	..	..	..	..	..	162	548
Butterfish (greenbone)	..	..	..	..	..	..	1,129	3,618
Conger-eel	145	150	..	..	145	150	157	161
Cream-fish	..	..	..	..	..	..	287	201
Elephant-fish	7	19	..	..	7	19	6,146	13,238
Flounders	..	..	..	..	..	..	17,752	64,567
Frost-fish	4	6	..	..	4	6	5	8
Garfish (piper)	..	..	..	..	..	..	116	338
Gurnard	519	480	23	23	542	503	25,203	24,916
Hake	824	2,879	..	..	824	2,879	1,934	5,850
Hapuku (groper)	34,796	117,231	27	85	34,823	117,316	38,752	130,296
Herrings	..	..	..	..	..	..	1,591	1,649
John-dory	8	13	..	..	8	13	2,038	3,107
Kahawai	118	118	6	5	124	123	534	466
Kingfish	329	512	32	38	361	550	452	673
Ling	5,792	11,815	..	..	5,792	11,815	11,764	22,950
Mackerel	..	..	..	..	..	..	532	375
Maomao	1	1	..	..	1	1	6	9
Moki	30	57	1	2	31	59	3,964	6,472
Mullet	..	..	..	..	..	..	1,961	3,385
Parori	..	..	..	..	..	..	145	198
Perch	43	31	..	..	43	31	79	58
Pioki	987	1,362	1	2	988	1,364	4,099	5,004
Red cod	79	76	..	..	79	76	2,890	2,591
Sardine	..	..	..	..	..	..	223	156
Shark	1,691	2,203	..	..	1,691	2,203	2,439	3,156
Skate	4	3	..	..	4	3	32	19
Snapper	17,597	32,477	740	1,294	18,337	33,771	134,517	214,933
Sole	..	..	..	..	..	..	24,681	74,510
Swordfish (marlin)	..	..	..	..	..	..	..	..
Tarakihi	548	1,028	7	19	555	1,047	111,010	193,354
Trevally	60	54	..	..	60	54	6,651	5,111
Trumpeter	109	241	..	..	109	241	123	282
Tuna	..	..	..	..	..	..	..	..
Warehou	3	5	..	..	3	5	409	639
Whiptail	1	1	..	..	1	1	544	457
Whiting	..	..	..	..	..	..	91	70
Mixed flat fish	..	..	..	..	..	..	..	..
Mixed round fish and all fish not specified	244	281	..	..	244	281	4,576	2,674
Totals	103,694	247,189	839	1,477	103,933	248,664	449,903	864,332

TABLE IV—SHOWING APPROXIMATELY THE QUANTITIES OF DIFFERENT KINDS OF FISH LANDED AT PORTS DURING THE YEAR ENDED 31ST DECEMBER, 1949

—	Mangonui.	Whangaroa.	Bay of Islands.	Whangarei.	Auckland.	Thames.	Coromandel.	Mercury Bay.	Tauranga.	Whakatane.	Gisborne.	Napier.	Castle Point.	Wellington.	Makara.	Paremata.	Paraparaumu.
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
Barracouta	..	..	..	..	..	..	..	1	..	..	..	..	..	1,000	4	..	2
Blue cod	3	10	17	1	672	1	..	24	1	..	..	4	2	117	37	3	4
Bonita *(Brama)*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brill	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Butterfish	..	..	..	..	26	5	..	4	7	..	9	..	1	258	154	64	114
Conger-eel	..	..	..	..	..	..	..	..	31	..	..	..	..	48	13	2	..
Cream-fish	..	..	..	..	287	..	..	..	..	..	..	..	..	..	..	..	..
Elephant-fish	..	..	..	..	..	..	..	..	..	..	6	..	..	44	..	..	..
Flounders	2	23	457	40	379	4,432	..	5	11	78	118	347	..	2	..	6	..
Frost-fish	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	..	..
Garfish (piper)	2	..	43	..	53	..	..	..	..	..	..	..	..	..	..	..	..
Gurnard	..	..	..	17	5,949	1,022	3	3	89	34	1,396	3,762	..	260	..	..	2
Hake	..	..	..	..	72	..	..	..	..	..	..	34	..	875	..	10	..
Hapuku (groper)	182	39	177	158	1,965	..	..	296	362	34	576	1,153	112	9,944	37	3,158	234
Herrings	..	..	782	5	..	..	798	..	3	..	..	2	..	1	..	..	..
John-dory	..	..	..	..	298	..	..	..	..	..	1,037	562	..	7	..	..	..
Kahawai	74	4	46	8	30	170	..	6	94	8	62	1	..	..	..	..	3
Kingfish	6	38	48	3	154	23	..	20	18	1	..	13	..	66	13	..	..
Ling	..	..	..	..	..	..	..	..	..	..	..	4	..	2,852	..	47	2
Mackerel	..	..	..	..	..	..	..	..	..	..	..	..	..	153	..	..	..
Maomao	..	1	4	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Moki	..	..	..	..	..	..	..	..	..	..	1,028	898	13	1,121	23	6	1
Mullet	322	41	372	12	314	..	..	..	11	..	..	1	..	..	..	..	..
Parori	..	..	132	..	3	8	..	..	..	2	..	..	..	..	..	..	..
Perch	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pioki	..	..	..	25	718	268	..	31	7	15	58	6	..	674	4	7	..
Red cod	..	..	..	..	..	..	..	6	..	..	30	..	..	131	1	..	..
Sardine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Shark	265	99	113	294	751	31	..	45	7	..	..	14	..	9	..	..	2
Skate	..	..	..	..	..	..	..	..	..	..	1	..	..	9	..	..	..
Snapper	733	794	1,695	4,246	92,262	11,511	129	1,131	1,633	1,326	1,108	2,432	7	605	80	104	461
Sole	..	..	..	3	7	..	..	..	..	..	415	461	..	2	..	..	..
Swordfish (marlin)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tarakihi	5	8	35	60	22,604	..	..	110	10,354	197	8,797	15,625	..	31,234	8	35	63
Trevally	185	..	21	189	5,397	131	..	6	254	66	33	..	..	194	10	1	3
Trumpeter	..	..	..	..	1	..	..	..	..	..	..	..	1	5	..	..	..
Tuna	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Warehou	..	..	..	..	..	..	..	..	..	..	..	..	..	263	84	..	27
Whiptail	..	..	..	..	..	..	..	..	..	..	..	..	..	306	..	..	..
Whiting	..	..	..	..	..	..	..	..	..	..	..	..	..	91	..	..	..
Mixed flat fish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mixed round fish and all fish not specified	4	1	13	186	1,226	..	..	7	66	1	1	1	..	341	..	..	..
	1,783	1,058	3,955	5,247	133,169	17,602	930	1,695	12,948	1,762	14,675	25,320	136	50,617	468	3,443	918

TABLE IV—SHOWING APPROXIMATELY THE QUANTITIES OF DIFFERENT KINDS OF FISH LANDED AT PORTS DURING THE YEAR ENDED 31ST DECEMBER, 1949—*continued*

	Manawatu.	Wanganui.	Patea.	New Plymouth.	Kawhia.	Raglan.	Manukau.	Kaipara.	Hokianga.	Golden Bay.	Motueka.	Nelson.	French Pass.	Havelock.	Picton.	Blenheim.	Kaikoura.
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
Barracouta	..	..	17	43	..	83	..	9
Blue cod	..	9	..	13	..	2	..	..	..	15	24	21	825	417	302	1	21
Bonita (*Brama*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Brill	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Butterfish	..	..	..	..	..	..	..	..	1	..	..	..	232	6	99	5	46
Conger-eel	..	..	..	..	..	..	..	..	..	..	..	..	40	..	14	..	2
Cream-fish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Elephant-fish	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	21	21
Flounders	..	139	1	..	211	196	381	1,861	36	..	132	1,141	..	273	9	149	11
Frost-fish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Garfish (piper)	..	..	..	..	..	..	18	..	..	..	..	..	..	..	..	..	..
Gurnard	..	15	..	124	..	..	..	..	..	..	761	5,768	25	93	..	..	23
Hake	..	..	..	6	..	..	..	..	..	..	..	1	3	..	..	..	11
Hapuku (groper)	..	12	14	..	334	23	7	1	..	..	42	23	63	841	866	3,035	3	1,034
Herrings	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
John-dory	..	..	..	..	43	..	..	..	..	..	..	40	13	..	38	..	..	..
Kahawai	..	..	..	..	1	..	1	10	9	..	..	..	..	..	..	..	..	..
Kingfish	..	..	..	..	20	..	..	1	..	..	..	..	..	11	14	2	..	1
Ling	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	14	183	1,356
Mackerel	..	..	..	..	..	..	..	..	..	..	..	..	..	21	..	..	357	..
Maomao	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Moki	..	..	..	..	1	..	..	..	..	..	1	..	47	..	3	378	13
Mullet	..	..	..	..	..	1	..	311	305	271	..	..	..	..	..	..	..	..
Parori	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Perch	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pioki	..	..	..	..	96	28	4	25	5	..	..	171	376	1	147	1	..	..
Red cod	..	..	2	..	..	..	..	..	..	..	..	1	2	1	2	..	97	19
Sardine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	223	..	..	..
Shark	..	..	..	..	8	1	..	..	199	..	..	..	..	5	333	210	36	10
Skate	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Snapper	..	141	284	..	2,623	355	717	274	382	48	121	1,743	6,391	269	676	26	38	7
Sole	..	..	1	..	9	..	..	..	..	..	..	9	189	..	94	1	177	82
Swordfish (marlin)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tarakihi	..	1	..	..	187	..	..	..	..	..	..	231	..	68	4	6	246	219
Trevally	..	..	..	..	62	3	5	1	2	..	..	..	87	..	..	..	..	..
Trumpeter	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Tuna	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Warehou	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whiptail	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whiting	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mixed flat fish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mixed round fish and all fish not specified	..	..	..	..	1	2	24	167	21	..	..	..	10	2	12	..	6
	308	311	..	3,527	623	934	1,046	2,930	377	178	3,138	14,069	2,442	3,197	3,817	1,691	2,895

TABLE IV—SHOWING APPROXIMATELY THE QUANTITIES OF DIFFERENT KINDS OF FISH LANDED AT PORTS DURING THE YEAR ENDED 31ST DECEMBER, 1949—*continued*

	Lyttelton.	Akaroa.	Lake Ellesmere.	Timaru.	Oamaru.	Moeraki.	Kaiteme.	Port Chalmers.	Taieri Mouth.	Nuggets.	Waikawa.	Bluff-Stewart Island.	Riverton District.	Hokitika.	Greymouth.	Westport.	Chatham Islands.
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
Barracouta	21	12	..	49	..	20	138	11,027	..	..	3	3	..	..	58	..	..
Blue cod	..	10	..	2	356	1,243	171	348	110	108	420	16,670	758	..	..	..	7,676
Bonita *(Brama)*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brill	..	..	..	34	..	..	..	15	..	22	2	5	..	..	31	53	..
Butterfish	3	3	..	..	..	..	..	..	..	..	..	92	..	..	..	..	..
Conger-eel	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..
Cream-fish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Elephant-fish	2,028	998	..	2,626	32	..	..	131	..	14	..	..	..	..	131	90	..
Flounders	648	142	2,335	2,503	7	..	21	944	34	351	98	49	30	..	87	63	..
Frost-fish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Garfish (piper)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gurnard	1,328	486	..	2,253	119	..	..	498	..	38	20	126	..	..	375	614	..
Hake	253	82	..	246	..	1	..	339	..	..	..	..	..	..	..	1	..
Hapuku (groper)	463	1,045	..	3,763	2,642	1,053	80	1,394	486	297	385	1,049	69	..	1,119	42	140
Herrings	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
John-dory	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kahawai	..	..	..	..	..	3	..	3	..	1	..	..	..	..	..	..	..
Kingfish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ling	1,997	535	..	3,672	41	17	6	934	2	16	10	1	..	..	45	23	..
Mackerel	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Maomao	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Moki	120	49	..	24	..	6	1	229	2	..	..	..	..	..	..	..	..
Mullet	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Parori	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Perch	..	1	..	..	..	3	..	38	..	..	..	37	..	..	..	..	..
Pioki	52	1	..	12	..	..	..	1,065	..	1	..	..	..	..	127	174	..
Red cod	223	13	..	280	42	17	5	1,708	6	66	9	1	..	..	181	47	..
Sardine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Shark	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	..
Skate	1	..	..	..	..	..	..	18	..	3	..	..	..	..	..	..	..
Snapper	35	2	..	8	..	..	..	2	..	..	..	..	..	..	41	77	..
Sole	530	156	..	1,610	61	..	46	10,648	638	2,935	3,999	886	..	..	897	825	..
Swordfish (marlin)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tarakihi	7,469	459	..	2,255	102	4	..	9,566	1	1	..	15	..	..	268	773	..
Trevally	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Trumpeter	10	2	..	..	..	1	..	2	..	..	1	97	..	..	..	..	..
Tuna	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Warehou	..	..	..	..	..	..	..	35	..	..	..	..	..	..	..	..	..
Whiptail	..	..	..	..	..	..	..	238	..	..	..	..	..	..	..	..	..
Whiting	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mixed flat fish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mixed round fish and all fish not specified	41	17	..	66	..	4	..	2,175	..	10	1	166	..	..	4	..	..
	15,223	4,017	2,335	19,403	3,402	2,372	468	41,359	1,279	3,863	4,948	19,197	857	..	3,364	2,791	7,816

TABLE V—SHOWING TOTAL QUANTITIES OF WET FISH LANDED EACH MONTH DURING 1949

Port or District.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
North Island	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
Mangonui	98	105	202	256	73	120	127	101	103	149	130	319	1,783
Whangaroa	47	55	104	112	66	105	94	76	93	105	110	91	1,058
Bay of Islands	451	462	447	308	240	373	215	188	243	277	407	344	3,955
Whangarei	358	342	515	494	251	439	377	404	545	573	533	416	5,247
Auckland	6,538	9,037	10,290	9,377	11,827	10,293	11,300	13,155	11,834	16,412	12,841	10,175	133,169
Thames	1,110	1,298	1,736	1,615	1,153	1,551	2,025	2,172	2,205	1,306	912	519	17,602
Coromandel	62	152	166	91	28	33	71	19	23	29	154	102	930
Mercury Bay	187	182	202	259	121	265	108	44	31	89	49	158	1,695
Tauranga	639	948	789	985	922	854	1,067	1,537	1,508	1,244	1,341	1,114	12,948
Whakatane	79	83	90	85	187	61	52	196	182	315	252	180	1,762
Gisborne	1,049	1,311	1,421	1,124	668	1,108	1,241	1,258	1,480	1,557	1,220	1,238	14,675
Napier	1,140	2,350	1,926	1,377	1,475	1,691	2,834	2,246	2,818	4,054	1,667	1,742	25,320
Castle Point	22	34	20	16	12	..	1	..	..	5	8	18	136
Wellington	3,116	3,999	5,494	3,506	4,932	3,717	3,898	3,464	4,513	3,764	5,183	5,031	50,617
Makara	61	19	99	28	33	33	46	65	39	3	39	3	468
Paremata	306	233	255	155	920	546	332	80	26	68	343	179	3,443
Paraparaumu	71	113	141	150	75	68	78	86	28	..	56	52	918
Manawatu	35	43	47	42	35	3	3	5	34	7	35	19	308
Wanganui	40	36	23	29	79	9	20	10	22	3	20	20	311
Patea	..	..	..	..	..	..	..	..	..	..	..	..	..
New Plymouth	276	222	309	247	317	287	234	252	258	321	399	405	3,527
Kawhia	75	49	53	56	57	25	30	55	40	21	102	60	623
Raglan	185	81	53	58	160	20	61	28	79	25	134	50	934
Manakau	106	101	107	88	91	42	26	32	131	88	164	70	1,046
Kaipara	337	418	313	223	202	136	162	161	218	313	251	196	2,930
Hokianga	56	44	37	16	8	7	18	20	17	49	58	47	377
South Island													
Golden Bay	26	11	33	24	57	12	5	..	1	..	..	9	178
Motueka	572	144	165	82	163	349	332	243	192	399	310	187	3,138
Nelson	637	689	1,511	1,149	1,531	870	1,031	1,184	1,347	1,364	1,814	942	14,069
French Pass	161	193	321	207	518	199	155	142	207	97	151	91	2,442
Havelock	522	219	252	233	568	286	109	190	125	240	263	190	3,197
Picton	178	200	429	450	474	440	477	226	138	171	340	294	3,817
Blenheim	146	163	48	67	64	376	41	37	178	279	227	65	1,691
Kaikoura	147	238	403	348	352	141	282	46	90	370	344	134	2,895
Lyttelton	704	1,160	887	1,164	1,583	985	1,899	1,329	1,307	1,254	1,782	1,169	15,223
Akaroa	251	489	409	194	520	224	286	317	304	315	518	190	4,017
Lake Ellesmere	232	210	199	74	85	86	81	85	180	415	505	185	2,335
Timaru	924	1,463	2,002	1,560	2,537	1,118	1,335	1,435	1,503	1,571	2,249	1,706	19,403
Oamaru	413	466	410	370	538	117	98	168	104	234	261	223	3,402
Moeraki	85	206	347	226	496	104	49	142	111	314	180	172	2,372
Karitane	69	85	114	92	43	..	3	1	..	6	37	18	468
Port Chalmers	1,460	5,098	4,502	3,099	4,573	1,994	2,192	2,193	1,371	4,869	8,328	1,680	41,359
Taieri Mouth	107	174	117	158	146	3	1	..	10	98	200	265	1,279
Nuggets	431	414	377	78	318	34	98	22	155	676	631	629	3,863
Waikawa	450	475	502	304	806	174	110	255	419	789	503	161	4,948
Bluff - Stewart Island	1,566	1,727	3,427	1,569	4,796	529	1,208	1,711	689	690	1,109	176	19,197
Riverton District	99	137	142	28	97	20	6	18	62	75	135	38	857
Hokitika	..	..	..	..	..	..	..	..	..	..	..	..	..
Greymouth	548	179	560	328	398	171	130	147	202	127	506	68	3,364
Westport	367	147	316	189	360	231	139	176	290	204	231	141	2,791
Chatham Islands	..	314	1,266	933	595	1,409	1,072	530	846	851	..	..	7,816
Totals	26,539	36,318	43,578	33,623	45,550	31,658	35,649	36,251	36,301	46,185	47,030	31,221	449,903

TABLE VI—SHOWING QUANTITIES OF THE MAIN SPECIES OF FISH LANDED EACH MONTH AT THOSE PORTS WITH A TOTAL CATCH OF OVER 10,000 CWT.

Port and Kind of Fish.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Auckland	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
Snapper	4,311	6,394	7,651	6,487	7,469	6,707	8,355	9,103	8,201	12,559	9,261	5,764	92,262
Tarakihi	1,233	1,362	1,255	1,515	3,115	2,159	1,526	2,418	1,936	1,733	1,729	2,622	22,604
Gurnard	303	314	458	485	547	535	143	562	477	753	594	478	5,949
Trevally	399	575	422	379	304	418	504	459	463	629	390	455	5,397
Hapuku	21	30	31	91	137	256	245	177	268	194	191	324	1,965
Wellington													
Tarakihi	2,096	2,700	4,039	2,399	2,658	2,045	1,669	1,820	2,611	1,962	3,591	3,644	31,234
Hapuku	721	686	630	479	1,034	732	1,349	793	952	740	970	858	9,944
Ling	73	132	184	205	460	446	412	387	208	98	194	53	2,852
Moki	9	42	8	14	111	111	117	34	82	508	55	30	1,121
Barracouta	44	17	59	33	64	105	128	94	134	92	109	121	1,000
Port Chalmers													
Barracouta	356	1,743	971	495	1,719	269	83	195	158	1,356	3,553	129	11,027
Soles	798	1,525	1,285	707	974	198	210	267	526	1,524	1,814	820	10,648
Tarakihi	18	391	827	980	734	756	1,199	1,095	276	1,290	1,781	219	9,566
Hapuku	64	235	221	120	251	76	20	20	54	85	188	60	1,394
Red cod	46	362	160	231	282	150	144	92	9	93	25	114	1,708
Napier													
Tarakihi	823	1,362	1,143	1,053	1,033	1,200	1,763	1,570	1,735	2,293	803	847	15,625
Gurnard	153	531	465	94	90	147	278	243	234	548	474	505	3,762
Snapper	28	118	68	106	132	110	327	253	438	578	134	140	2,432
Hapuku	61	68	26	20	138	165	215	46	134	177	63	40	1,153
Timaru													
Hapuku	125	390	569	366	571	123	25	18	64	407	697	408	3,763
Ling	73	219	306	556	1,030	418	328	78	40	127	307	190	3,672
Elephant-fish	170	72	83	50	210	112	129	306	686	309	259	240	2,626
Tarakihi	85	32	15	34	113	70	79	39	138	350	711	589	2,255
Gurnard	44	109	253	118	211	144	341	479	239	156	85	74	2,253
Flounder	323	346	391	210	183	138	212	298	192	112	53	45	2,503
Soles	61	170	336	188	178	86	182	182	132	52	27	16	1,610
Bluff - Stewart Island													
Blue cod	1,426	1,588	3,051	1,289	4,225	420	1,105	1,639	515	356	912	144	16,670
Hapuku	81	108	224	137	389	23	16	24	1	16	25	5	1,049
Soles	20	1	61	91	99	53	54	21	121	246	105	14	886
Thames													
Snapper	299	725	1,235	1,303	941	1,126	1,667	1,922	1,819	222	107	145	11,511
Flounder	762	521	419	211	74	238	15	26	227	859	732	348	4,432
Gurnard	26	31	33	49	118	161	274	137	77	89	26	1	1,022
Lyttelton													
Tarakihi	166	148	65	576	988	746	1,559	943	730	364	740	444	7,469
Elephant-fish	164	167	68	95	102	39	96	110	200	576	232	179	2,028
Ling	115	79	90	279	251	146	114	99	90	79	460	195	1,997
Gurnard	47	238	235	79	78	12	68	113	162	105	85	106	1,328
Gisborne													
Tarakihi	749	900	1,088	909	408	845	841	792	520	432	653	660	8,797
Gurnard	36	115	44	19	115	89	128	99	95	260	225	171	1,396
Snapper	95	59	66	52	52	50	49	88	251	217	55	73	1,108
John-dory	57	54	64	53	32	50	49	87	251	214	53	73	1,037
Moki	56	54	64	53	39	50	49	87	251	215	37	73	1,028
Nelson													
Snapper	226	426	854	654	1,020	522	470	464	340	446	622	347	6,391
Gurnard	192	177	497	356	349	264	435	600	836	773	934	355	5,768
Flounder	160	48	78	77	83	45	75	77	108	96	153	141	1,141
Tauranga													
Tarakihi	386	717	418	730	713	672	863	1,384	1,366	1,008	1,187	910	10,354
Snapper	203	182	290	173	143	123	97	70	51	147	59	95	1,633

TABLE VII—SHOWING THE TOTAL QUANTITY AND VALUE OF FISH, CRAYFISH, AND SHELL-FISH IMPORTED INTO NEW ZEALAND DURING THE NINE MONTHS ENDED 30TH SEPTEMBER, 1949, AND EXPORTED FROM NEW ZEALAND DURING THE TWELVE MONTHS ENDED 31ST DECEMBER, 1949

Fish Imported

Kind of Fish.	Quantity.	Value.
		£
Fish—salted, pickled, dried	266 cwt.	5,939
Fish—frozen, smoked	87 cwt.	490
Fish, canned—		
Herring, pilchard, sardines, &c.	1,619,536 lb.	182,029
Salmon	5,553 lb.	836
Other kinds	55,240 lb.	7,677
Total	..	196,971

Crayfish and Shell-fish Exported

Kind of Fish.	Quantity.	Value.
		£
Crayfish, including craytails	6,388 cwt.	85,061
Mussels	93 cwt.	475
Oysters—		
In shell	1,220 doz.	62
Frozen	700 doz.	45
Total	..	85,643

Fish Exported—Frozen

Kind of Fish.	Quantity.	Value.
		£
Barracouta	1,532 cwt.	4,908
Blue cod	15,820 cwt.	91,774
Brill	79 cwt.	547
Cream fish	9 cwt.	31
Eel	16 cwt.	75
Elephant-fish	71 cwt.	310
Flounder	2,651 cwt.	16,632
Gurnard	3,813 cwt.	20,879
Hake	268 cwt.	1,469
Hapuku	3,802 cwt.	27,001
John-dory	1 cwt.	9
Kahawai	16 cwt.	79
Kelp	69 cwt.	403
Ling	2,259 cwt.	9,276
Makerel	1 cwt.	3
Moki	440 cwt.	1,958
Perch	75 cwt.	190
Red cod	289 cwt.	1,586
Snapper	4,438 cwt.	29,218
Sole	11,033 cwt.	72,198
Tarakihi	10,644 cwt.	69,212
Trevally	919 cwt.	4,458
Trumpeter	4 cwt.	22
White fillets	2,877 cwt.	13,686
Other kinds	241 cwt.	956
Total	61,367 cwt.	366,880

Fish Exported—Smoked

Kind of Fish.	Quantity.	Value.
		£
Mixed	726 cwt.	5,037

Fish Exported—Dried, Pickled, or Salted

Kind of Fish.	Quantity.	Value.
		£
Anchovies	234 cwt.	1,474
Other kinds	87 cwt.	722
Total	321 cwt.	2,196

Fish and Shell-fish Exported—Preserved in Tins

Kind of Fish.	Quantity.	Value.
		£
Clam chowder	18,058 lb.	655
Crayfish	25,200 lb.	4,540
Herring	291 lb.	20
Mussels	5,257 lb.	298
Oysters	11,567 lb.	2,001
Toheroa	31,128 lb.	3,189
Whitebait	10,064 lb.	2,210
Other kinds	697,390 lb.	43,214
Total	798,955 lb.	56,127

TABLE VIII—RETURN OF LAND ENGINEERS', ENGINE-DRIVERS', ELECTRIC- AND CABLE-TRAM DRIVERS' EXAMINATIONS FOR THE YEAR ENDED 31ST MARCH, 1950

Place.	Extra First Class.		First Class.		Second Class.		Locomotive and Traction.		Locomotive.		Traction.	
	P.	F.	P.	F.	P.	F.	P.	F.	P.	F.	P.	F.
Auckland	..	..	8	3	43	10	1	..	..	..	..	..
Blenheim	..	..	..	..	6	..	..	..	..	..	..	..
Christchurch	..	..	4	4	29	3	..	..	1	..	1	..
Dunedin	..	..	2	..	23	2	3	..	1	1	1	1
Gisborne	..	..	1	..	2	1	..	..	..	..	..	..
Greymouth	..	..	..	3	10	3	3	..	3	..	..	..
Hamilton	1	3	7	1	31	4	1	..	1	..	..	..
Invercargill	..	..	3	..	10	4	1	..	..	..	..	..
Napier	..	..	1	..	7	1	..	..	1	..	..	..
Nelson	1	..	2	..	3	..	..	..	..	..	..	..
New Plymouth	..	..	1	..	38	16	..	..	..	..	..	..
Oamaru	..	..	..	..	3	..	..	..	..	..	..	..
Other places	..	..	..	..	6	1	..	..	1	..	..	..
Palmerston North ..	..	..	1	1	19	4	..	..	..	..	..	..
Timaru	..	..	..	..	8	..	..	..	..	..	2	..
Wanganui	..	..	2	1	10	3	..	..	..	..	..	..
Wellington	..	..	5	2	24	7	..	..	..	..	1	..
Whangarei	..	..	..	..	..	1	..	..	..	..	..	..
	2	3	37	15	272	60	9	..	8	1	5	1

TABLE VIII—RETURN OF LAND ENGINEERS', ENGINE-DRIVERS', ELECTRIC AND CABLE-TRAM DRIVERS' EXAMINATIONS FOR THE YEAR ENDED 31ST MARCH, 1950—*continued*

Place.	Winding.				Tram-drivers.				Totals.		Grand Total.
	Steam.		Electric.		Electric.		Cable.				
	P.	F.	P.	F.	P.	F.	P.	F.	Passed.	Failed.	
Auckland	..	..	..	..	46	..	..	..	98	13	111
Blenheim	..	..	..	..	..	..	..	..	6	..	6
Christchurch	..	..	..	..	8	..	..	..	43	7	50
Dunedin	..	..	..	..	6	..	1	..	37	4	41
Gisborne	..	..	..	..	..	..	..	..	3	1	4
Greymouth	..	..	1	..	..	..	..	..	17	6	23
Hamilton	..	..	2	..	..	..	..	..	43	8	51
Invercargill	..	..	..	..	6	..	..	..	20	4	24
Napier	..	..	..	..	..	..	..	..	9	1	10
Nelson	..	..	..	..	..	..	..	..	6	..	6
New Plymouth	..	..	..	..	5	1	..	..	44	17	61
Oamaru	..	..	..	..	..	..	..	..	3	..	3
Other places	..	..	..	..	..	..	..	..	7	1	8
Palmerston North	..	..	..	..	..	..	..	..	20	5	25
Timaru	..	..	..	..	..	..	..	..	10	..	10
Wanganui	..	..	..	..	2	1	..	..	14	5	19
Wellington	..	..	..	..	29	5	6	..	65	14	79
Whangarei	..	..	..	..	..	..	..	..	..	1	1
	..	..	3	..	102	7	7	..	445	87	532

TABLE IX—SUMMARY OF CASUALTIES TO SHIPS REPORTED TO THE MARINE DEPARTMENT DURING THE YEAR ENDED 31ST MARCH, 1950

Nature of Casualty.	On or Near the Coast of New Zealand.			Outside New Zealand.			Total Number Reported.		
	Number of Ships.	Registered Tonnage.	Number of Lives Lost.	Number of Ships.	Registered Tonnage.	Number of Lives Lost.	Number of Ships.	Registered Tonnage.	Number of Lives Lost.
Strandings									
Total loss	..	..	..	..	..	..	..	..	..
Damaged	5	4,726	..	2	269	..	7	4,995	..
Undamaged	5	5,156	..	..	..	..	5	5,156	..
Total strandings	10	9,882	..	2	269	..	12	10,151	..
Collisions									
Total loss	..	..	..	..	..	..	..	..	..
Damaged	15	20,776	..	..	..	..	15	20,776	..
Undamaged	2	23	..	..	..	..	2	23	..
Total collisions	17	20,799	..	..	..	..	17	20,799	..
Fires									
Total loss	1	6	..	..	..	..	1	6	..
Damaged	1	9,441	..	..	..	..	1	9,441	..
Undamaged	1	6,243	..	..	..	..	1	6,243	..
Total fires	3	15,690	..	..	..	..	3	15,690	..
Miscellaneous, including damage by heavy seas, machinery defects, &c.	7	2,595	..	1	4,453	..	8	7,048	..
Grand totals	37	48,966	..	3	4,722	..	40	53,688	..

Table X—Summary of Examinations for Certificates as Masters and Mates for the Year Ended 31st March, 1950

Class of Certificate.	Auckland.			Wellington.			Totals.			Grand Total.
	P.	P.P.	F.	P.	P.P.	F.	Pass.	Partial Pass.	Failed.	
Foreign Going Masters and Mates	23	6	..	24	13	6	47	19	6	72
Home Trade Masters and Mates ..	9	3	..	12	5	..	21	8	..	29
Master of a River Steamer ..	3	..	1	4	..	2	7	..	3	10
Master of an Oil Engine Vessel under 6 tons register	10	..	..	1	..	..	11	..	..	11
Home Trade Yacht Master ..	..	..	..	..	..	2	..	..	2	2
Compass Deviation	..	..	..	..	..	1	..	..	1	1
Square Rigged Endorsement ..	..	..	..	4	..	..	4	..	..	4
Fore and Aft Endorsement ..	..	..	..	1	..	..	1	..	..	1
Totals	45	9	1	46	18	11	91	27	12	130

Table XI—Summary of Examinations of Marine Engineers for the Year Ended 31st March, 1950

Class of Certificate.	Auckland.			Wellington.			Christchurch			Dunedin.			Other Places.			Totals.			Grand Total.
	P.	P.P.	F.	P.	P.P.	F.	P.	P.P.	F.	P.	P.P.	F.	P.	P.P.	F.	P.	P.P.	F.	
Imperial Validity																			
1st and 2nd Class Steam ..	5	8	14	18	31	36	2	4	9	..	6	3	..	..	..	25	49	62	136
1st and 2nd Class Motor ..	2	..	..	8	1	5	4	..	..	1	..	..	..	..	..	15	1	5	21
1st and 2nd Class Steam Endorsements	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
1st and 2nd Class Motor Endorsements	..	..	..	5	..	..	..	..	..	1	..	..	..	..	..	6	..	..	6
	9	8	14	31	32	41	6	4	9	2	6	3	..	..	..	48	50	67	165
Valid in New Zealand Only																			
3rd Class Steam	26	..	18	29	..	12	11	..	3	8	..	4	..	..	..	74	..	37	111
River Steam	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2	..	1	3
1st and 2nd Class Coastal Motor	10	..	3	12	..	1	3	..	1	1	..	..	..	..	..	26	..	5	31
River Oil	35	..	3	1	..	..	1	..	..	..	..	..	20	..	6	57	..	9	66
	72	..	24	42	..	13	15	..	4	9	..	4	21	..	7	159	..	52	211
Totals	81	8	38	73	32	54	21	4	13	11	6	7	21	..	7	207	50	119	376

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