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ROYAL COMMISSION INTO THE SAFETY OF VESSELS

To His Excellency Major General Sir Douglas Anthony Kendrew, Knight Commander of the Most Distinguished Order of Saint Michael and Saint George, Companion of the Most Honourable Order of the Bath, Commander of the Most Excellent Order of the British Empire, Companion of the Distinguished Service Order, Governor in and over the State of Western Australia and its Dependencies in the Commonwealth of Australia.

May it please Your Excellency:

1. By a commission under the hand of His Excellency the Governor dated the 18th day of March, 1964, I was appointed to be a Royal Commission.

2. The terms of appointment as published in the Government Gazette of the 20th March, 1964, are as follow:

ROYAL COMMISSION.

WESTERN AUSTRALIA


To William John Wallwork, Esq., of 15 Birdwood Parade, Nedlands, in the State of Western Australia, Stipendiary Magistrate:

I, the said Governor, acting with the advice and consent of the Executive Council do hereby appoint you WILLIAM JOHN WALLWORK to be a Royal Commission to enquire into and report upon the following matters, in relation to ships to which the Western Australian Marine Act, 1948-1962 applies and which proceed outside inland waters, that is to say:

(a) the adequacy of the present legislation (including regulations thereunder) concerning seaworthiness of and lifesaving equipment to be carried on the ships and any improvements considered to be desirable;

(b) the ability of the Harbour and Light Department effectively to administer such legislation and improvements thereto, and to take Court action thereunder, having regard to present staff and legal requirements, and what further staff and facilities (if any) should be made available to the Department for such purposes;

(c) the requirements and standards of qualifications for masters, mates, engineers, marine motor engine drivers and coxswains' certificates, respectively, and any improvements considered to be desirable;

(d) the adequacy of the present organisation and facilities for the search and rescue of persons missing at sea from such ships and any improvements considered to be desirable;

(e) the attitude to, and views on, the foregoing matters of those affected by such legislation and its enforcement; and

(f) generally into the safety of such ships and those aboard them while at sea, and recommendations for or in regard to legislation, organisation, control, facilities, education or other matters to provide or improve measures for such safety

and I hereby declare that by virtue of this Commission you may in the execution hereof do all such acts, matters and things and exercise all such powers as a Royal Commission or the Chairman or members of a Royal Commission may lawfully do and exercise whether under or pursuant to the Royal Commissioners' Powers Act, 1902-1956, or otherwise.

GIVEN under my hand and the Public Seal of the said State, at Perth, this eighteenth day of March, One thousand and nine hundred and sixty-four.

By His Excellency's Command,

DAVID BRAND,
Premier.

GOD SAVE THE QUEEN ! ! !

In pursuance of that Commission I have the honour to submit the following Report:

CHAPTER 1.—HISTORY AND PROCEDURAL ASPECTS OF THE ROYAL COMMISSION.

The Royal Commission was appointed on 18th March, 1964, and notice of the appointment published in Government Gazette No. 27, on 20th March, 1964. Cabinet had approved of the appointment on 10th March, 1964, following a series of events associated with the disappearance and presumed loss, with all three crew members, of the fishing vessel "Cathy Jo" somewhere west of Dongara, on or about 15th February, 1964. An intensive search for the vessel by sea and air had been carried out, but with no appreciable result other than the finding at the southern tip of Pelsart Island near Wreck
Point in the Houtman Abrolhos of an improvised raft made of floats, identified as belonging to the “Cathy Jo”. On 18th August, 1964, police skin divers recovered from the ocean off Green Island about 1 mile south of the main lighthouse, at Rottnest, a large number of floats, with ropes, secured to some wreckage of a boat. The wreckage was covered in marine growth and appeared to have been in the water for a considerable time. The floats, ropes and wreckage were identified as part of the vessel “Cathy Jo” and her equipment. No bodies were ever found and no Coroner’s Inquest has been held. It is not likely that the cause of the “Cathy Jo” disappearance will ever be determined nor will her exact whereabouts at the time. Her loss followed losses of the fishing vessels “Linda” near Moore River, “Marlene Anne” near Escape Island, “Carol Lee” near Rottnest, “Kerry Lee” in a locality unknown, “Nor 6” near Shark Bay and “Wahni” near Kalbarri, all within a period of approximately three years. Altogether eighteen lives were lost from these vessels. The disasters gave rise to misgivings concerning the seaworthiness of the vessels, the efficacy of the safety equipment carried or which should have been carried, the competence of the skippers and crews, the administration of the Harbour & Light Department and the efficiency of the search and rescue organisation.

The Royal Commission was the outcome of Cabinet consideration of the situation existing following the disappearance of the “Cathy Jo”. The terms of reference are phrased in general words and the Commission was not required to find the cause of disaster in any particular case even if it were now possible.

Mr. K. G. Forsyth, Manager, Harbour & Light Department, Fremantle, Mr. G. Travla, President, Geraldton Fishermen’s Association, Mr. R. T. Napler, Chief Inspector of Police, Perth, and Captain C. F. Woodcock, Marine Surveyor and Assurance Assessor, Perth, were appointed as my Advisers. Mr. Travla attended all thirty-six sittings of the Commission; Mr. Forsyth attended all but one sitting; Mr. Napler attended all but three and Captain Woodcock attended twenty-nine sittings. All absences were with my knowledge and consent.

The Commission first sat at Geraldton on May 12th, 1964. Prior to that date, three notices were published in each of the daily newspapers circulated in Perth and a similar notice was published in the Sunday newspaper and the Geraldton Guardian, inviting any person who was in a position to appear before the Commission is annexed as Appendix “A”.

On August 18th, 1964, Cabinet decided to extend the Terms of Reference to cover the insurance of ships by adding reference “(g)” which reads:

“(g) and, further, the insurance of such ships and recommendations for measures to provide a better coverage for those ships against all or major risks.”

On 25th August an advertisement was inserted in each of the two daily newspapers covering the new subject matter and inviting interested persons to submit evidence. In addition letters were sent to insurance companies, or to groups thereof, known to be dealing in marine insurance, seeking information. Evidence was received at sittings of the Commission held at Perth on 14th September, 1964, the response being quite satisfactory.

During the course of the Commission, in addition to the original advertisements in the local newspapers, interested Commonwealth and State Government Departments, Yacht Clubs, Shire Councils, Police Stations and the like, were informed by letter, telephone, personal interview and by printed notices of the sittings of the Commission, with accompanying requests for evidence. One hundred and seventy-two persons gave oral evidence before the Commission. It was not found necessary to issue any subpoenas. A list of witnesses in the order of their appearance before the Commission is annexed as Appendix “A”.

As no counsel was available immediately from the Crown Law Department to assist the Commission, the idea of having counsel was abandoned. Mr. W. C. H. Haines of the Mines Department was appointed Secretary to the Commission.

Mr. N. MacDougall of the Commonwealth Crown Solicitor’s Office attended early sittings holding a watching brief on behalf of all Commonwealth Government Departments and authorities associated with air-sea rescue work and radio telephony. He appeared later as counsel representing the Departments.
Eighty-seven exhibits were tendered in evidence and 2,124 pages of transcript notes were taken during the proceedings. The list of exhibits is attached hereto as Appendix "B".

All hearings were in public and all exhibits were available for inspection to the public and press.

In submitting this Report, I desire to express my appreciation for the co-operation received from persons connected with the Commission during these proceedings. In particular I desire to thank the Honourable the Premier for making rooms available at Parliament House and also to thank the officers of Parliament House for their assistance during the proceedings. I wish to record my appreciation to the Chief Hansard Reporter and his Staff for the prompt and accurate reporting of the daily transcript which was of great value to myself and my Advisers. I should also like to record my appreciation of the coverage of the proceedings of the Commission by the newspapers and especially to thank those members of the newspaper reporting staffs who accompanied the Commission to the coastal anchorages, the Abrolhos and the North West ports.

I am greatly indebted to my Advisers for their willingness to co-operate and to assist with technical and practical advice. Their courtesy was unfailing at all times. We all owe a great deal to Mr. Haines, the Secretary, for his capable organisation of the sittings of the Commission, both in the city and at outposts, and for his handling of the complicated travelling arrangements. Without his firmness combined with patience in handling members of the Commission, reporters, drivers and witnesses alike the Commission could not have been so successfully concluded.

CHAPTER II.—INTRODUCTORY.

GEOGRAPHICAL AND BIOLOGICAL.

Although the terms of reference which were to be the subject of enquiry and report in this Royal Commission embraced all classes of ships to which the Western Australian Marine Act, 1948-1962, applied, the evidence adduced at the public hearings was directed almost exclusively to fishing vessels and private pleasure boats. Brief references were made to coast trade ships, harbour and river ships and to hire boats. The only references to pearling and whaling boats concerned marking for identification purposes, in the case of pearling boats, and radio telephonic in the case of whaling boats. Such references were in favourable terms, made only for purposes of comparison with the fishing industry. There was no request to the Commission to receive evidence concerning such vessels or to make inspections. The port of Broome, which is the centre of the pearling industry, was not visited. A comparison was made by witnesses between the qualifications of masters and coxswains of coast trade ships and harbour and river craft, on one hand and fishing vessels on the other. This comparison did not directly concern measures for improvement in the matter of safety. A number of witnesses dealt with the safety requirements concerning hire boats as compared with the very limited control of private pleasure boats. One witness in particular devoted his evidence to safety precautions taken in the case of sea-going passenger ferries. A safety matter of vital importance concerning all vessels operating outside harbour and river limits, to wit, the lighting of the Western Australian coast for navigation purposes, was raised by witnesses in all categories.

The coast of Western Australia North of Cape Naturaliste was described in its most favourable aspect as—a fair weather coast with practically no fog, short-lived gales and mainly moderate weather. (Trans. p. 7.)

The same witness, a master mariner, stated further—... there are many reef bound coasts in the world and quite a number of them do not share the same climate as we do. As far as a mariner is concerned the greatest hazards he has to face in taking a small craft along a coastline are poor visibility, especially with a ship not equipped with radar, or prolonged gales which make position finding very difficult; and the fact that we have a very reef-strewn sort of coast is well compensated by the fact that we have a good weather coast and visibility is usually very good. (Trans. pp. 26-27.)

Taken as a whole and in its less favourable aspects another master mariner described it in the following terms—... the Western Australian coast is of such a nature and compass and is subject to such a variety of weather, tidal and ocean current conditions that all vessels over 300 tons trading on this coast should be manned ..., as foreign going vessels. (Trans. p. 764.)

Yet another master mariner described the coast in these terms—

The coastline of Western Australia extends for nearly 4,000 miles and is very poorly provided with navigational aids, lights, radio beacons, etcetera. The north and north-west coasts experience giant tides, which sluice among a myriad islands and reefs, with the added seasonal risk of destructive cyclones sweeping down from the Arafura Sea.

The west coast is studded with offshore reefs and dangers which, when combined with the unpredictable sets and strong on-shore winds, have been the graveyard of many ships.
The south coast is rugged and inhospitable, battered by the huge swells of the Southern Ocean which has the deserved reputation of being one of the world's stormiest. (Trans. p. 1857.)

Excluding the products of pearling and whaling, the wholly or substantially exploited fishing grounds in Western Australia are located on the western and southern coasts and at Exmouth Gulf and yield the following principal varieties: crayfish, prawns, snapper, jewfish, salmon, herring and shark. On the northern coast a small group of boats is based at Point Samson working on the Spanish mackerel grounds. This fishery could well extend to the Northern Territory border in the course of time. Of the greatest economic importance to Western Australia and to the Commonwealth is the crayfish industry, prawn fishing being as yet only partially exploited. The vessels and men engaged in the crayfisheries far outnumber all others combined. In his scientific review "The Western Australian Oceanography, C.S.I.R.O., describes the extent of the crayfish areas and the growth of the industry in the following terms:

Crayfishing is carried out in coastal areas over a distance of about 600 statute miles between latitudes 25°S. and 33°S., to a depth of about 45 fathoms. Some fishermen operate at greater depths. The chief areas of commercial production lie between latitudes 29°S. and 32°S. These areas extend from Port Gregory, 40 nautical miles north of Geraldton, to Rottnest and Garden Islands, off Fremantle, and include coastal waters to depths of 40 to 50 fathoms (varying from 15 to 20 nautical miles off-shore), together with the inner and outer reef systems of Houtman Abrolhos. This highly productive region occupies some 300 statute miles of coastline and covers a crayfish bearing area of approximately 8,000 square miles within the 45-fathom line. The most prolific situations are reef-ledge and reef-flat systems, and not the sand, mud and fine shell grounds which make up at least half the surveyed area. (at p. 9.)

He proceeds to describe the development of the industry between 1944 and 1961:

1944-1947: The chief outlet for commercial crayfish in this period was at Geraldton, where the tails were canned by hand. The fishery was restricted to reef areas at a depth where the pots could be worked in this manner, consequently the shallow-water areas within the Abrolhos were favoured by the fishermen even though the various fishing grounds of that area were from 30 to 40 nautical miles from the processing port of Geraldton.

1948-1953: The industry during this period shared in the advantages of post-war reconstruction. Marine engines were available and fishing boats were fitted as motor craft, in some cases with an auxiliary sail. Disc power-winches were installed to assist in pot hauling. This factor led to operations in deeper waters as well as to more intensive fishing of the shallower grounds. Markets were established in the United States of America for frozen crayfish tails and processing and freezing plants were built at Geraldton, Fremantle and Lancelin. Small ships of 50 to 70 feet in length, popularly known as "freezer-boats", were fitted out as mobile, refrigerated, processing plants.

Fishermen were organised on a contract basis by the new processing companies, and towards the end of the period the only threat to expansion appeared to be the scarcity of bait for crayfish pots.

1954-1961: More powerful engines were fitted to crayfishing vessels and echo-sounders were introduced to locate suitable fishing grounds.

During the period some crayfishermen formed co-operatives, one at Geraldton and one at Fremantle. Supplies for the latter were drawn from the relatively distant Lancelin area, as well as from grounds off Fremantle. The fishery extended northwards of the Murchison River to the fringing reefs of Dirk Hartog Island, and in 1955, to deep-water areas outside the Abrolhos system proper. By 1960 reef systems to the north of North Island, Houtman Abrolhos were worked; further expansion in this area is to be expected. In Dongara, which has a fishable area of over 2,400 square miles, larger vessels worked some of the reef areas of Clio Reef, Turtle Dove Shoals, Pelsart Bank and Beagle Island. The search for more distant fishable areas is continuing, e.g., the extension of the fishery northwards of Houtman Abrolhos, whilst regions of which major reef systems are known and fish are being explored in greater detail with echo-sounders.

The fishing fleet now includes a considerable proportion of large, seaworthy vessels with crews experienced in operating under the difficult conditions prevailing over the Western Australian coastal shelf. (At pp. 9-10.)

In describing marine crayfish behaviour and fishing practice, Dr. Sheard writes:—

The marine crayfish is an omnivorous, nocturnal feeder, sheltering during daylight and reputedly during periods of strong moonlight, among the crevices and caves of reefs and ledges, and among coral growths where these exist,
e.g., Houtman Abrolhos. Normally they move about during hours of darkness, feeding in close proximity to shelter, the directions and extent of their wanderings controlled by characteristics of the reef topography and incidence of food-providing organisms.

Because of the relatively sedentary nature of the juvenile and adult crayfish the population is divided into stocks, more or less independent during that phase, and of unequal size. These inhabit reef systems of varying degrees of complexity and of exposure to heavy seas.

General fishing practice is either to set the baited pots in clusters, usually in groups of five but individually buoyed, around and amongst reef outcrops, coral lumps, and areas of heavy marine growth, or, when a rock ledge has been located, along this, at the foot or on top, as experience dictates.

Large numbers of immature crayfish on coastal reef systems moult in November of each year. The exo-skeleton of these is parchment yellow to light pink in colour due to a reduction in the normal colouring pigments, principally carotenes, whence they are termed colloquially "White Crayfish" (Sheard 1949; George 1958). After moulting, and when the new exo-skeleton is hardened sufficiently, they leave the shallower onshore reef areas and move seaward to deeper reefs during the latter part of November, and in December, slowly deepening in colour. To take advantage of this limited migration, fishermen set their pots seaward of the reef systems, generally on margins of the consolidated sands over which the crayfish pass. At present this phase of the fishery yields about 40 per cent. of the yearly total weight. (At p. 14.)

In use, pots are hauled singly, generally in the morning when the land breeze is blowing and before the sea breeze has gained full strength. When hauled they are emptied of crayfish, minor repairs are made to hauling ropes and buoy ropes and to the pots. These are re-baited and re-set, pots not catching well being moved to likelier sites. Because these operations are carried out during daylight hours, when crayfish are not actively feeding, the period of absence of the pot from the sea-bottom does not represent an interruption to the trapping process.

In areas close to anchorages and in the sheltered, shallow waters of Houtman Abrolhos fishermen aim at lifting their pots daily. On the deep-sea fishing grounds longer intervals are the rule. In both types of areas the practice is growing of setting in the beginning, more pots than can be handled efficiently in one hauling period. In these cases one half of the set is pulled on one day, the other on the next; because of interruptions due to bad weather some pots are hauled at longer intervals. Catches so obtained are satisfactory to fishermen but the risk of loss of pots through chafing of buoy ropes is considerable, as is that of loss of crayfish from damaged pots, and from undisturbed invasions of predators, particularly the octopus. Hence fishermen endeavour to keep intervals between hauls as short as possible.

Because the process of lifting, emptying, and sorting of crayfish, pot mending and re-baiting are time-consuming and because the period of time during which these processes can be carried out is limited by weather and sea conditions, and by the time occupied in travelling from anchorages to the fishing grounds it follows that in a given area a fisherman can manage efficiently only a certain number of pots, that number varying from one ground to another, and from time to time, as weather and sea conditions vary. Fishermen are aware of this but tend to operate pots in excess of the efficient number, partly, as detailed above to ensure that some of a set will be in a position to catch well, partly to detect local crayfish migrations, partly to pre-empt areas within which to set the main runs of pots, and partly for reasons of prestige. Generally, a lower number of pots, hauled at daily intervals, is used on high-yielding grounds, a higher number, hauled less frequently on low-yielding areas.

Fishing boats are used as transports and as working platforms on which to carry out pot maintenance, hauling and laying and crayfish sorting and storage. They include several classes, the sixteen-foot and upward "scooter boats," adapted to work in the shallow, protected Abrolhos inner waters; the twenty to forty-foot fishing boats designed to work among the inner and outer coastal reef systems; and freezer-boats of up to eighty feet in length, operating in open sea, deeper waters, at considerable distances from anchorages. Each of the various classes is efficient when working within the conditions for which it was designed but not so in other circumstances.

Improvements in vessel design and increase in horsepower have continued during the life of the fishery. This has resulted both in an expansion of the area available to the fishery, a process which is continuing, and in extensions of the time which can be spent hauling and maintaining pots under conditions of freshening wind and rising sea; and, thus, in a progressive increase in the number of pots which can be worked efficiently, although at an increased cost. (At pp. 19-20.)

The total catch in each year is thus the sum of catches from fishing grounds which are at different levels of exploitation. That catch is contributed to by
fishing boats which are of a number of different types and sizes, each type suitable for work in specific areas. The types may be grouped as follows: Small, shallow draft, craft suitable for working at low cost on the onshore reefs, and at the inner reef areas of the Abrolhos; medium sized craft, limited by weather conditions but capable of working well off-shore within reasonable distances of local anchorages; and large well equipped craft, often fitted as freezer boats. They work in areas distant from anchorages and carry a disproportionately large number of crayfish pots. (At p. 37.)

Dr. Sheard has divided the year into a monthly calendar of the crayfishery, as follows:

November.—Coastal areas north of latitude 30 deg. S. opening on November 15. Abrolhos areas are closed. Coastal areas south of 30 deg. S. are open from November 15. In both cases fishermen are preparing for the new season's fishery on the run of recently molted, pale coloured, immature crayfish ("White" crayfish) which usually commences in the last few days of the month.

Winds are variable, onshore-offshore, tending to strong southerlies north of Jurien Bay but with calm periods in all areas.

December.—Both coastal areas open for fishing, Abrolhos closed. Winds are variable, onshore-offshore, south of 30 deg. S. strong southerlies north of 30 deg. S.

January.—Both coastal areas open, Abrolhos closed. Winds as for December.

February.—As for January. Winds as for December.

March.—Both coastal areas open, Abrolhos open March 15. Winds as for December but periods of calm in all areas.

April.—All areas open. Winds variable, generally light.

May.—All areas open. Winds variable, onshore and offshore, but with occasional strong westerlies to southerlies.

June.—All areas open. Winds variable, westerly gales and storms particularly in southern areas.

July.—All areas open but little fishing south of latitude 30 deg. S. owing to weather conditions. Winds strong with series of westerly storms and gales in all areas.

August.—Coastal areas south of latitude 30 deg. S. open but weather conditions limit fishing. Coastal areas north of latitude 30 deg. S. open. Abrolhos areas close on August 14. Winds variable with moderate southerlies north of Jurien Bay and with westerly storms southwards.

September.—Coastal areas north of 30 deg. S. were open until 1960; closed in 1961 and thereafter. Abrolhos closed. Winds variable, onshore-offshore but with moderate southerlies north of Jurien Bay.

October.—Coastal areas north of 30 deg. S. open until 1960, closed in 1961 and thereafter. Abrolhos and coastal areas south of lat. 30 deg. S. closed. Fishermen generally preparing for new fishing season in all areas. Winds variable but with moderate southerlies and westerlies. (At pp. 10-11.)

Dr. Sheard made the following further comments as part of his submission in writing to the Commission:

The fishery has attained its present magnitude from small beginnings in about 16 years. The normal course of the evolution of a fishery is much slower. During that period boat design is improved and adapted to meet the requirements both of fishing, and weather and sea, conditions in particular areas and circumstances. Even the best of hull designs must be tested by experience. There has not been sufficient time for thoroughly satisfactory designs to have evolved here, although some of the larger vessels are of good standard.

To some extent, and particularly in the smaller vessels (under 40 ft.) the position has worsened in that hulls designed for sail power, which gives some stern lift, have been fitted with powerful engines which give stern drag and dip, thereby increasing the risks. Such a combination is particularly hazardous in the case of a vessel, loaded by the stern, transporting pots, with a heavy following sea.

During the sixteen years the demand for fishing vessels increased at such a rate that small boats designed for sheltered waters, and designed more to catch the eye of an amateur than to give service under working conditions, were brought into the fishery. In many cases these have not sufficient beam either for safety or for adequate working and stowage room.

These references have been quoted in order to convey some idea of the difficulties confronting the cray fishermen in earning a living and maintaining an industry of great economic importance to this country. Similar difficulties are experienced in catching snapper, jewfish, salmon and shark. The prawn fishermen are more fortunate in that they operate in the normally calm waters of Shark Bay and Exmouth Gulf, although these areas are subject to sudden and violent storms as well as the hazards of shoal waters and other local obstructions. The dangers of fishing operations accompany fishermen in their movements coastalwise, to and from anchorages, and do not cease even at moorings which are frequently located at unprotected anchorages.
CHAPTER III.—CAUSES OF CASUALTIES TO VESSELS.

In dealing with the causes of casualties to vessels in the fishing industry, numbering 122, for the period 1st June, 1957, to 30th June, 1964, a witness, A. F. McKimmie, Engineer and Ships' Surveyor of the Harbour and Light Department supplied the following information:—

The reasons for these casualties can be attributed to—

Item 1—Dragged or Broke Moorings—27 Per Cent.:—
Vessels are operating out of anchorages which are not safe anchorages in any weather and others which are exposed to N.W. gales which frequently traverse the coastline. The majority of these losses are sustained by small craft which are not capable of riding out heavy weather and are usually operated by fishermen who are not aware of the risks taken in using an unsafe anchorage or are prepared to take a risk with their craft without making adequate provision for suitable moorings.

Quite a number of strandings can be attributed to moorings not being examined frequently enough.

Item 2—Dumped in Breakers near Reefs—24.5 Per Cent.:—
This percentage has increased greatly in recent years due to the greater number of fishing boats operating and fish being harder to get, also the financial liabilities some fishermen have, forced them to attempt to obtain fish irrespective of the risks involved. Inexperienced and careless fishermen now take their craft into dangerous waters to find fish and through passages full of hazards which a few years ago the more experienced men would not consider using.

Smaller type craft are the worst offenders in this respect.

Item 3—Struck Reefs—15 Per Cent.:—
Causes of these losses are similar to previous item, that is, taking craft into waters where a good seaman would hesitate to go. Also included are vessels which have struck reefs due to faulty navigation or lack of local knowledge.

Item 4—Unknown—13 Per Cent.:—
This item comprises vessels reported lost but not clearly stating the reasons, also vessels the reason for their loss being not known. In all cases it can fairly be said they were due to the previous three causes and in addition overloading.

Item 5—Sprung Leak—6.5 Per Cent.:—
Leakage has been caused by a number of reasons; i.e., striking floating objects, damage by craypot floats and sprung seams in heavy seas mainly to fast plywood craft which are driven into big seas at a greater speed than they should be.

Item 6—Fire or Explosion—5 Per Cent.:—
By far the majority of cases have occurred on craft driven by petrol engines, caused mainly by lack of care when fuelling, that is spilling fuel into bilges and the carriage of reserve petrol in tins and drums which eventually rust out and leak into bilges. Poor ventilation accounts for a small proportion.

Item 7—Engine Failure and Stalling—4 Per Cent.:—
Whilst above is the main reason for these vessels being lost, in most cases it would have been avoided if the vessels had more sea room at the time of failures. No allowance is made for failures such as this; that is, the vessels are in dangerous water before faults can be rectified.

Item 8—Engine Failure and Mechanical Failure—3.3 Per Cent.:—
Engine failures in this item are major engine breakdowns, electrical faults such as flat batteries, faulty starter motors, and also steering gear damage or failure.

Item 9—Overloaded—1.6 Per Cent.:—
This figure represents the known cases of overloading, included in the 13 per cent. “unknown causes” would be a number of cases of overloading but definite evidence that this is the cause has not been obtained. (Trans. pp. 705-706.)

The causes of the casualties to vessels, in many cases accompanied by the loss of valuable lives, point a clear indicator to the risks which constantly attend operations in the fishing industry in Western Australian coastal waters. It is not the intention of the Commission to make findings in specific cases because there is no such requirement in the terms of reference. In some instances, insurance claims are under consideration. The liability of the insurers in each case, if disputed, may be determined by a properly constituted Civil Court and not by Royal Commission. This Commission has no desire to embarrass either the claimant or the insurers.

It is clear, from the scientific information given by Dr. Sheard and already quoted, that the hazards of reef fishing and the crayfishing industry are inseparable, that is, if it is considered to be in the interests of the national economy to maintain the industry on its present sound footing.

Dr. Sheard made the following further comments:—

It is generally agreed that the fishery is now a very intensive, highly competitive one, and that easily fished accumulated stocks are considerably diminished. Also, although the present catch is much the same as in recent years, that the cost of getting that has increased.
The effect of this, from the point of view of the Commission, is that the fishermen must take more risks to secure their livelihood. One consequence of this is that reef systems, hitherto regarded as hazardous and avoided accordingly, are fished, not only on their margins but in their broken water, using vessels which were not designed for that purpose.

Although the Fisheries Department acted several years ago to set a ceiling limit on the number of boat licenses issued, this was set at a number at the height of the fishery. To put the matter bluntly, we are now in a position where too many men are chasing too few crayfish, spread too thinly. In these circumstances, and despite any regulations, the risks will continue to be taken.

It is the opinion of this Commission that, while it would be impossible to eliminate all of the risks associated with fishing, both professional and amateur, much could be done to lessen their effects by more rigid adherence to established safety precautions and the addition of merely a few extra safeguards indicated by casualties already experienced.

At this point, it would be advantageous to recount some of the experiences of fishermen as narrated in evidence as well as some of their comments to demonstrate the hazards encountered, the risks taken as a matter of course and the outcome. Firstly, the evidence of skipper, grade 2, R. J. Kannikoski, of Geraldton; continuing the narrative concerning an incident introduced by Mr. Travla:

By Mr. Travla: About three weeks ago I was loading up alongside the Geraldton wharf and we had our wireless on to four megacycles and I overheard a conversation. I recognised Mr. Kannikoski's voice. He was talking to another boat saying, "I cannot see the men." That is the first I heard. He said, "Yes, I can, they are on top of the boat." He said, "There is another big wave coming, we will wait and then come in and pick them up." There was a pause for about 10 minutes. I suppose there were about 25 people crowding around our wireless set and I thought that he had gone too, but later on he was back on the air and said he had the two men on board. Will you tell us how it happened and where?—It was one of those things. We were in a place where we should not have been that morning. There was a big swell running but sometimes we take chances. Any boat would have gone down in that breaker. It was about 20 ft. high. That is one of those occupational hazards.

By the Commissioner: Was the other boat pulling pots?—No, it was on our way through the passage between the breakers.

Was the boat that went down your own?—It was not my own.

You rescued them?—Yes.

Was this breaker an unusual one or were they coming in every now and again?—It was unusually big. It was one of those really big ones right in the place where we usually go out.

Whereabouts did this happen?—About four miles west of Rat Island.

In shallow water?—It was five or six fathoms.

Mr. Travla: There is a gap in the reefs and the boats take a short cut. In fine weather it is quite safe, but overnight a big ocean swell comes in and there is no passage there at all, it is just a continuation of the breakers. As I see it, they were taking a short cut with their pots and he was unlucky. He capped one and over went his boat. A bit further I overheard the other man saying, “The boat is sunk now alongside the pots.” Where it is sunk there are pots by the thousands.

By the Commissioner: Was the boat a complete loss?—Yes. It overturned when it capped a wave at the stern.

Would you ever be able to stop men from fishing in waters like those?—No, because that ground is quite safe generally. It is only dangerous in a big swell, and we never go there in a big swell. It is a short cut to the continental shelf. That route saved me between 45 and 60 minutes.

By Mr. Forsyth: You took a risk?—It was not a risk.

The boat which went through took a risk?—Yes.

By Mr. Travla: Did he have a wireless on board?—Yes, we were talking only five minutes before that happened. We said it was a bit ticklish that morning, but if we turned back it would be more dangerous because of the hundreds of lumps. We had to stay there until the sun was further north, or to go through.

By Mr. Forsyth: You say that in the circumstances of your calling you take these risks, knowing full well that you will be caught ultimately?—I did not.

The average fisherman does?—I do not think so. Most of us will not go if we think the swell will break. When the swell breaks in water of five or six fathoms, there are hundreds of tons of water coming down.

How do you account for the fact that out of 126 boats lost in the last nine years, 48 of them were lost through being caught with dump breakers on reefs?—I have been working at the breakers, and I did that for about eight or nine years, but I have not lost a boat. I suppose I was lucky. If you are working in these waters, and a breaker comes from outside and the wind is blowing towards the breakers, if your engine was stopped, you would have a chance of losing the
boat; otherwise you do not go to the breakers. The person who goes to the breakers is looking for trouble.

All the equipment in the world will not save you if you are caught in one of these.—None, because there is no time to use your wireless. In the case I referred to he went over about 50 yards from where I was.

By Mr. Napier: Is there anything on this boat in the way of floating material which would have assisted the men?—There was a big engine cover and that came loose. Somebody found part of the wheelhouse in the Southern Group, and the life jackets were picked up by another person. The boat went over so quickly that they could not make use of the equipment. They were on the overturned boat. I put on my life jacket and dived in to get them. (Trans. pp. 49-52.)

Next, I quote the comments of coxswain C. B. Bateman of Lancelin:

The point is that you cannot form a standard for the sea. If you have not had experience you cannot say how dangerous the sea is or where it is likely to break. You can come in and watch the sea breaking and then wait for the right time, or what you think is the right time and it will still break. Only experience will show you the danger of the sea. If you know that it is likely to make you keep away. I have lost good gear because I would not pick it up. I have had to leave it there because I felt it would be dangerous to try to pick it up; whereas others in trying to pick up their gear cop the lot. (Trans. p. 282.)

Shark fisherman, L. E. Renfrey of Mandurah made the following comments:

We just don't go out at any time. If it was blowing a gale we wouldn't pick up our shark lines because, after all, we want to get back again; but in the crayfishing game they have to get there and they don't worry about the barometer dropping or about rough seas. They take £20,000 boats up to 6 ft. or 7 ft. off the rocks where they shouldn't be, just to get a dollar. We only go out if we think we can get home again. We watch the barometer, but in the crayfishing industry it's a different thing. They have to deal with their pots. In the bad weather and if it is too rough to fish, we don't go. That's the difference between the two industries. (Trans. p. 399.)

Next, the comment of skipper, grade 2, R. E. Hugill of Scarborough:

It is the hazard of the game. For a time crayfish have been in the surrounding areas outside the reefs in the safer grounds, but now generally the only crayfish to be obtained are getting back on to the reefs. To earn a living you must now fish nearly on top of the reefs or adjacent to them. This will be one of the serious questions. I think it is mainly up to the seamanship of the man himself who must, at all times, never turn his back on the water as they can creep up innocently. You must have plenty of knowledge and know that the waves build up a quarter of a mile away. After years of experience you can glance at the water and pick the big waves when they build up over a quarter of a mile away and this gives you a chance to get out of the area. (Trans. p. 1122.)

The same witness narrated one of his experiences at rescue work when he was directed to Wreck Point, 10 miles south of Moore River, while the vessel concerned was stranded on a reef near Wreck Point at the southern tip of the Abrolhos:

Recently when the “Atlantic Ocean” went aground at the Abrolhos Island I was at Yanchep hotel in the evening when a message came through from Captain Head at Fremantle to say a boat had struck a reef and was sinking rapidly, and asked for help. Constable Martin approached me and asked how soon I would be ready to start a search for the boat. I said I would be ready in 20 minutes. We returned to camp and got a thermos of coffee, together with dry clothes for any survivors coming out of the water. We then made a search for the boat. We travelled 40 miles over the reef in a howling south-wester, and our windscreen was smashed by big waves, because we had to go on top of the reef to look for the boat. We reached Moore River in the daylight when a message was sent to a fisherman to notify the police that we had searched the area from Yanchep to approximately three miles north of Moore River, and that we were returning to base. We had not seen any wreckage. (Trans. p. 1126.)

Next, the comment of coxswain S. T. Liddon of the Abrolhos who works a “scooter” boat:

We will take risks. You have to these days to catch crayfish. But it has to be a calculated risk. You will get a proportion of small boats lost—perhaps a large proportion; but I don’t think you will get a large proportion of men drowned, because in nearly every case where a small boat has gone down the man has been rescued. He can either swim ashore or someone picks him up. The small boats keep an eye on each other. I work on the main reef. I might decide to go out and get a couple of pots that are unsafe. I will look around and see if anyone is around in case I go. To catch crayfish you have to take calculated risks. (Trans. p. 1550.)

M. H. Glazier, who also works a “scooter” boat at the Abrolhos:

Look at it this way: There are quite a number of chaps using small boats, like myself. I use a 14-ft. aluminium hull
which has buoyancy in it. In the first year I operated it behind the reef over there, which is fairly rough at times and it is a little bit precarious where you go. I have been rolled over. In the first year I lost count of the number of times, but I never lost the boat. I lost a little bit of my gear out of it. I had a little bit of a swim, too. There was no actual danger provided you could swim reasonably well.

By the Commissioner: What distance would you have to swim?

Well, I have evolved a method if I get rolled in a breaker when the motor has stopped. All these are occupational hazards which seem to be associated with this game. They happen occasionally. I would say that what I usually do is that I drop over the stern and wait for the breaker to hit me; that's if the motor is not going. If the motor is going, it doesn't worry me. I run away from the breakers. It is a fast boat and can keep in front of them and they don't worry me at all. If the motor stopped for some unknown reason I get a rope around my screw and jump overboard and hang on to the rope so that it doesn't turn this way (indicating) too much. The boat fills with water, but the force of the breakers would take me into shore. I bale the water out of the boat and dry out the top of the motor and start it up again. (Trans. p. 1379.)

A few years ago I had an experience when I was working on a boat called the "Valkyrie". We were coming from Shark Bay and we had bags of floats on board. We struck a blow coming down the coast which was fierce. It was a 20-ft. boat and it completely turned turtle. We threw everything heavy overboard and I thought these floats would be handy if we went into the drink. It was a big wave that hit us and I saw it looming up and I threw the chaps who was with me a bag of floats and he was able to hold on. However, after I went overboard when I came up I saw a bag of floats and tried to grab them but I was not in the race to catch them. Johnny Weismuller would not have caught them, they were travelling that fast. I thought it was a good illustration that if you had a raft on board you would not catch it in a sea like that or with breakers with a fair amount of turbulence and the sea moving fast. (Trans. pp. 1377-78.)

Next the comments of skipper, grade 2, W. T. Newbold, of Geraldton:—

You cannot eliminate all the risk from fishing. From time immemorial we have had the risk of men going down to the sea in small ships. Many words have been written about this and you cannot eliminate all risk. Many pounds, shillings and pence of your income depend on how accurately you anticipate the advantages, and most of the time that is the only advantage you have, and every man who has access to that advantage will share in the pounds in the water. (Trans. pp. 1477-78.)

Next, the comments of coxswain A. L. Grigg of Walpole, fisherman:—

Along the south coast I do not operate in water under seven fathoms in the open sea.

You confine yourself to the waters that do not break?

It is too rough to operate there. To all intent and purposes the water could break. There is one place west of an island where the water is concentrated in a corner and has to run back. Even though there are nine fathoms, the water breaks when the swell is running. As a fisherman you cannot be told about these things; you must learn them for yourself. Good seamanship is acquired through experience. I do not think it can be taught by any other means. Navigation is of no use to a person who does not know the sea and how it behaves, particularly the amount of drift from different forces of wind, and how to make allowances on a long journey for the amount of drift. (Trans. p. 1749.)

Next, the comments of Geoffrey Bourne, Lieut.-Commander, R.N., retired:

Inevitably in this type of work men will be spurred on by greed, capital debts, competition, overcrowding, to contradict their better judgment or at any rate press their luck. They have gone to sea with poor equipment, carried too many pots, have been forced to work in adverse weather conditions all with very reasonable excuses looked at from the business point of view, but one has to be a very good seaman and to be strong willed to know just how far one can go and to stop at that point.

It is very easy in an examination to say what one would or would not do in a hypothetical emergency or what action one would take under certain circumstances, but when the individual is under pressure from external forces, particularly financial ones, it is also very easy to say—"she'll be right". We read in the newspapers the sad story of those who have found that it is not necessarily "all right", but we never hear of those, who can quite justifiably say to themselves—"There, but for the Grace of God, go I." The sea does not take note of hard luck stories. (Trans. pp. 815-816.)

And, finally, the summary of skipper, grade 1, G. J. Annear, who represented the Rock Lobster/Crayfish Industry Development Association of Australia (Inc.):—

It does not matter how knowledgeable or practical a man may be at sea, there will always be the circumstances that could beat him. It does not matter how
good a boat may be at sea, there will be
the time when it could get into trouble.
It does not matter what equipment is
fitted it will always be subject to mech-
anical failure and, despite all precau-
tions the operator may take, there will
always be the time when precautions
will fail.

CHAPTER IV.—CAUSES OF CASUALTIES AND POSSIBLE REMEDIES.

Now to deal separately with the specific
causes of casualties to vessels:—

Item 1. The Dragging or Breaking of
Moorings.

Obviously these mishaps, which comprise
the highest percentage of casualties, to wit,
27 per cent., are due, as stated by the witness
McKimmie, to unsafe anchorages and inade-
quate provision for suitable moorings.

On the western coast, south of Shark Bay,
the only man-made safe anchorages are at
Geraldton Harbour, Fremantle boat harbour
and Bunbury harbour.

Natural safe anchorages exist in the rivers
and estuaries and in the Abrolhos and Fre-
mantle-Safety Bay Island groups.

There are partly safe natural anchorages
at various places along the coast such as Port
Gregory, Cervantes, Jurien Bay and Lance-
lin Island, but the safety of these anchorages
is dependent upon weather conditions.

On the southern coast safe anchorages
exist at Albany and Esperance as well as in
the rivers and estuaries.

With the exception of Fremantle all of the
rivers and estuaries present the hazard of
a treacherous bar crossing such as those at
Murchison River, Mandurah, Augusta, Norra-
lup and Wilson Inlet.

Carnarvon and Shark Bay provide reason-
ably safe natural anchorages as does the
northern coast, but all open water anchor-
ages are exposed to the violent cyclonic dis-
turbances peculiar to those areas.

There are many important anchorages be-
tween Murchison River and Augusta which
must be labelled as fair weather only. Hor-
rock's Beach, Port Denison (Dongara), Cliff
Head, Beagle Island, Green Head, Ledge
Point, Yanchep, Hall's Head (Mandurah),
Rockingham, Dunsborough and Flinders
Bay are some examples of such anchorages.

All of the anchorages mentioned give
whatever shelter they provide to all classes
of small vessels, including some 900 fishing
vessels and a large proportion of the 8,000
odd registered private motor boats, plus
yachts, rowing boats, dredges, barges,
etcetera.

Your Royal Commissioner and my advisers
are unanimously of the opinion that far too
little has been done at Government level for
the protection of ocean-going fishing and
private vessels by way of the provision of
shore facilities, which play such a vital part
in the welfare of vessels while at sea and
travelling to and from the sea. Such facili-
ties include light-houses, leading lights,
daylight markers, deep channels, safe anchor-
gages, slipways and mooring pens.

The charge cannot be laid against the fish-
ing industry that it has not moved to help
itself. It will be shown later that the fisher-
men and their co-operatives, as well as pri-
et industrials associated with the industry,
have made very substantial contributions to
the well-being of the industry and the cost
of its upkeep.

The statement shown below indicates the
contribution made by Western Australia to
the economy of the Commonwealth in the
matter of exports of marine products for the
years ending 30th June, 1963, and 30th June,
1964, respectively. The robust figure of
£5,872,000 or 69.9% of the total for the finan-
cial year just ended is a major effort.

Exports of Marine Products—State of
Shipment.

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<td>175</td>
<td>193</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>23</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>7,410</td>
<td>8,391</td>
</tr>
</tbody>
</table>

(e) Subject to revision.
Source: Commonwealth Statistician.

Inspections revealed that the best de-
veloped boat harbour on the western coast
is at Geraldton, followed by Fremantle, Bun-
bury and Rottnest in that order. Geraldton
possesses a completely safe anchorage of
ample space and depth with good holding
ground, mooring pens, loading wharf, en-
trance lights and slipways. Fremantle is
similar but it lacks the mooring pens and is
subject to surge through the exposed en-
trance in rough weather. Bunbury lacks
mooring pens and slipways. Rottnest lacks
slipways and mooring pens, for which, per-
haps, there is no need.

On the southern coast Albany, with its
natural resources, has sufficient accommo-
dation for its needs. Esperance, with its new
harbour in the making, will naturally follow
the development of Albany.

Carnarvon and Shark Bay (including Den-
ham and Monkey Mia) have the natural
anchorages, which are in need of further de-
velopment by way of adequately lit channels
and the provision of adequate shore facilities.
As with many of the undeveloped or under-
developed anchorages, immediate surveys are
required to determine the best positions for
locating anchorages and channels, as well as
day and night beacons.
The northern coast relies almost entirely on its natural resources by way of protected bays, river mouths and tidal creeks. Shore facilities are almost non-existent.

An ever-increasing body of tourists and amateur fishermen with trailer-borne vessels is streaming into the more remote outlets, where the beautiful scenery and swimming beaches, with bountiful fishing grounds, provide an all-year-round attraction. At holiday time the stream becomes a flood and the holiday makers are finding their way into every anchorage between Cossack and Esperance and even north and east of those points. The great number of motor boats already registered bears witness to the driving force behind this continuous migration.

The Houtman Abrolhos fishery is of a completely separate character. Even the existence of the islands and rocks as coral formations so far south is unique. They are a source of great marine wealth, but the fishery has asked little from public funds in return. Dr. Sheard says of them—

Houtman Abrolhos itself consists of groups of islands and shallow water reefs, each group delineated by fringing reefs and islands. The inner waters of each are shallow and are worked by small craft unsuited for working the adjacent deep and exposed open waters. Thus the Abrolhos fishery has developed with one set of men, with suitable craft and fishing gear, working the inner shallow and protected areas; and another set, often using the same anchorage, but with larger craft and with gear similar to that of the coastal fishery, working the outer grounds. Appropriate sorting of the returns provides the two sets of data. The Island groups themselves (Polart, Easter and Wallabi) are separated by deep-water channels and are sufficiently isolated for distinct fisheries to have developed. (The Western Australian Crayfishery, pp. 16-17.)

The fishery is dependent mainly upon Geraldton as a mainland port marketing base and off-season anchorage. Its immediate needs would be confined to lights and perhaps a few day marks.

The adequate provision of suitable moorings is obviously a matter for the fisherman or boat owner himself. To moor a vessel correctly with sufficiently strong gear is a matter of education and common sense. The safety of his vessel depends on his moorings' weakest point. The toll of broken and dragged moorings must also have a direct bearing on insurance premiums. If an official booklet of instructions and advice is issued to licensed or registered boat owners as the result of the report of this Commission a chapter should be devoted to correct mooring and maintenance of moorings. It is difficult to see how much more the department could do to assist, apart from allocation of areas and inspection of gear periodically in protected anchorages.

Safe Anchorages—Immediate Needs.

The port of Denison stands out as having a major and immediate claim on available public financial resources for the establishment of a completely equipped boat harbour, primarily for the use of fishing vessels and for the use of private vessels as an important but secondary consideration. Some natural protection is afforded the anchorage by a reef at the southern corner, but the whole anchorage is completely exposed to north-west to westerly gales. A loading jetty has been provided, but this also is as much exposed as any vessel lying in the anchorage. Inspection revealed that it is dangerous for fish or other cargo handling on account of the bad surge when a big ocean swell is running.

The importance of Dongara, that is, the Denison anchorage, as a fishing centre can be gauged from the figures for the calendar year 1963 stated hereunder. It should be noted that, for Fisheries Department statistical purposes, the ocean is divided into numbered squares of one degree latitude and longitude along the coast (see Appendix "C", Fig. 1.), and further, that boats move freely between adjacent blocks and that the numbers given do not represent the number of boats permanently using the anchorages. For example, it is possible that not more than 100 boats would use the Dongara anchorage at one time. The balance of the total given for the block would be spread out over the adjacent smaller anchorages and Geraldton. The same thing applies in relation to all of the major centres, subject to certain geographical limitation of operations gazetted from time to time.

Fish and Crayfish Production at Main Anchorages.

Calendar Year 1963.

<table>
<thead>
<tr>
<th>Block No.</th>
<th>Location</th>
<th>No. of Boats (Peak Period)</th>
<th>Crayfish</th>
<th>Other Fish</th>
<th>Value of Crayfish</th>
<th>Value of Other Fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>Houtman</td>
<td>103</td>
<td>1,712,143</td>
<td>303,789</td>
<td>835,630</td>
<td>21,660</td>
</tr>
<tr>
<td>30</td>
<td>Fremantle</td>
<td>49</td>
<td>614,104</td>
<td>451,381</td>
<td>113,718</td>
<td>22,047</td>
</tr>
<tr>
<td>31</td>
<td>Fremantle-Lincoln</td>
<td>2,718,250</td>
<td>59,872</td>
<td>614,104</td>
<td>35,624</td>
<td>4,081</td>
</tr>
<tr>
<td>32</td>
<td>Lucky Bay</td>
<td>50</td>
<td>3,018,267</td>
<td>57,677</td>
<td>180,592</td>
<td>603,342</td>
</tr>
<tr>
<td>33</td>
<td>Dongara</td>
<td>45</td>
<td>1,885</td>
<td>6,215,361</td>
<td>2,667</td>
<td>1,885</td>
</tr>
<tr>
<td>34</td>
<td>Geraldton</td>
<td>45</td>
<td>2,667</td>
<td>59,872</td>
<td>59,872</td>
<td>1,885</td>
</tr>
<tr>
<td>35</td>
<td>Abrolhos</td>
<td>45</td>
<td>2,667</td>
<td>614,104</td>
<td>2,667</td>
<td>4,081</td>
</tr>
</tbody>
</table>

(For further figures see Appendix "C" Figures 2 and 3.)

The figures reveal that as a fishing centre Dongara, and its port, Denison, are no less important than Fremantle or Geraldton and that the number of boats using the anchorage at peak periods is no less great. It follows that Dongara is entitled to an all-weather boat harbour with facilities equal to Geraldton boat harbour. The need is urgent and embraces all facilities such as breakwater, lighted entrance, mooring pens, slipways and loading wharf.

Juriel Bay and Lancelin follow closely behind Denison in order of importance. Here the financial outlay required should not be
so great because of the degree of natural protection afforded by the off-shore islands. Mooring pens and loading wharves would not appear to be a necessity. Jetties have been provided by private enterprise. It is understood that steps have been taken to light the channel into the Lancelin anchorage. The lighting of the main channel into Jurien Bay is also an urgent necessity. Both anchorages require some groyne protection and deepening.

A strong case has been made out at Mandurah and at Rockingham for the construction at each place of a boat harbour to serve the tourist industry together with the fishing and yachting fraternities. Whilst the fishing statistics quoted for these two centres do not alone justify the heavy expenditure required for the construction of boat harbours there is still room for the expansion of professional fishing activity. Exhibit 2, submitted in evidence at Mandurah, shows the hazards of the Hall's Head anchorage even in summertime. (Appendix "C," figure 4.)

The letterpress reads:

Mandurah: At least three boats, valued at about £8,000, were swept ashore at Hall's Head in a sudden north-westerly blow on Monday morning. Two other craft narrowly escaped a similar fate.

A jeep, owned by an enthusiastic volunteer, was engulfed by an incoming tide, and had to be dragged to safety by the shire council's new £9,000 grader.

The machine was then used for several hours salvaging two fishing boats owned by K. Cotter and H. Litchfield and a large launch owned by A. & D. Birkbeck, of Cottesloe.

Birkbeck's launch, washed up close to Cotter's craft, was first hauled to safety. Then Cotter's boat, after unsuccessful efforts had been made to move Litchfield's boat. Several hours were spent on salvaging Mr. Litchfield's craft.

Safety: All equipment, mast rudder and engine were removed to lighten the drag on the grader. At 3.30 p.m. this craft was finally hauled to safety, although big waves were still washing into the estuary, threatening to make a new entrance on the south corner.

Later, craft owned by Cotter and Birkbeck were moved into the safety of the estuary waters, but Litchfield's boat was taken to a slipway for necessary repairs.

Mr. K. Cotter said his 22 ft. boat had dragged two anchors.

Absent: He was absent in Perth when the blow struck, and had been unable to moor his craft in the estuary due to the shallow bar.

Messrs. D. & A. Birkbeck said their boat, 22 ft. long, 6 ft. 6 in. beam with inboard marine engine, had been moored at Hall's Head for the past two months. To them the unseasonal north-west blow was unexpected.

They had moored the boat in the cove because it was impossible to get through the bar. Their boat broke its anchor rope.

In submitting this exhibit, Mr. H. J. Sutton, spokesman for the Shire Council said,

The boats were anchored outside because they could not get through the bar. Normally when the fishermen cannot get through the bar they anchor their boats in the bay and then if a storm comes up they go out and take their boats up to Safety Bay. On this occasion the storm came up quickly and the three boats were lost. Much damage was done to them and one or two were complete write-offs, I think. (Trans. p. 373.)

The hazards of the Mandurah Bar are too well known to need detailed description. The same witness, Sutton, made the following general comments:

I am the spokesman for the Shire Council of Mandurah. They delegated me the authority to speak on their behalf. We feel there is room in Mandurah for improvement as far as boat safety goes. Our main concern, or our biggest hazard in Mandurah we consider is the ocean bar. Of course, we have the problem here of tourists or visitors coming to the town who are not aware of the local hazards. We have an increasing problem here with these boats which come down on trailers. In the majority of cases they are launched in the still waters of the Inland. It seems that before they go very far their first aim is to get out into the open water and to do that they must navigate our bar.

This bar has been a contention with Mandurah as long as Mandurah has been Mandurah. We do hope that perhaps in your findings you might be able to assist us in our endeavour to have this bar improved and made a permanent opening. The Government is working on the project now, we understand, but how long it will take, we do not know. You are probably aware of the fact that if we do not keep pushing we do not get anywhere. The bar varies from day to day and, at times, it is closed right up while at other times there is quite a respectable opening.

We consider that if there were a permanent opening, Mandurah would assist the State in the fishing industry. It has a marvellous potential and offers a safe anchorage between Rockingham and Bunbury. We feel that if this opening or anchorage were improved it would assist the fishing industry because boats which now have to operate from Bunbury or Fremantle could make Mandurah their base and so be saved many miles of travel, because a lot of fishing is done due west of here. They would be able to come in here and truck their fish to market rather than take it in their boats back to Fremantle. We have opening
here shortly a fish-filleting works and we feel that this will need more fish from the deep waters rather than rely on what is caught in the inland waters.

(Trans. pp. 371-372.)

The case for safe anchorage for small craft generally was presented by the witness M. J. Finn, Commodore, Royal Freshwater Bay Yacht Club, who stated:

Although giving evidence on small craft safety as Commodore of Royal Freshwater Bay Yacht Club, the matters to be placed before the Royal Commission are the concern of kindred yacht clubs and have been discussed with officers of Royal Perth Yacht Club, the Cruising Yacht Club of W.A., the Claremont Yacht Club, the South of Perth Yacht Club, and the Fremantle Sailing Club. They concern all users of small craft.

Very high in importance in matters appertaining to boats is the crafts’ harbour and mooring facilities. A safe and suitable harbour makes for peace of mind—which is important enough, but when it is at the termination of a gruelling and possibly fatiguing passage, a safe harbour becomes a paramount feature of small craft safety. Those connected with local small craft are well aware of the inhospitable nature of the West Australian coastline—and the dearth of harbours. It is a matter that has been brought forward on several occasions at this Royal Commission.

The Fremantle fishing boat harbour provides a harbour for our commercial fishing fleet, but cannot offer accommodation to private craft. Geraldton and Bunbury can at present harbour some boats—but the unhappy fact remains that for over 300 miles of coastline there is not an “outside” all-weather harbour for local or visiting privately owned craft whose rig, or conditions, prevents them negotiating the Swan River rail and traffic bridges. This means, of course, that a small vessel that was endeavouring to find shelter in bad conditions, on entering Fremantle Harbour would—and has—found only new hazards (large shipping gets into difficulties in adverse conditions) and no facilities whatsoever.

This is also true of Cockburn Sound, at Rockingham, in north-east to north-west gales, small craft, both commercial and private, find not shelter, but a dangerous untenable lee shore awaits them.

Over the years, many unpleasant and often dangerous dramas have been acted out by local small craft with no option but to enter the harbour in bad weather. These conditions have been highlighted when yachts from overseas, or other States, have been in local waters. These craft have followed correct procedure in applying for berths, and although Fremantle Harbour Trust officials have been sympathetic, and as helpful as possible, an exposed corner near the Navy berth was all that could be offered, and damage has been sustained.

At Rockingham the same conditions have prevailed in bad weather and strandings and damage have resulted to many commercial and private craft, including “Madelon”, a 37 ft. auxiliary ketch, and craft owned by men with long experience and sound boat knowledge. Even after being moved to the Point Peron end of the coast, considered the safest section, craft have still encountered trouble. These conditions are not restricted to winter gales. On several occasions in the height of summer north-east gales have struck the crowded Rockingham anchorage, causing chaos, strandings and damage, definitely impairing the whole area’s boating prospects.

From the foregoing it is evident that the major yacht clubs of this State consider that boat harbours at Fremantle and Rockingham are highly desirable in the interests of small boat safety. Many of the world’s largest ports include these facilities in their harbour services. Availability of such anchorages, encourages the ownership of wholesome, seaworthy craft. West Australian yacht clubs—already maintaining a high standard of safety, equipment and regulations in their ocean races—are embarking on projects that will insist on even higher standards as adopted by the Cruising Yacht Club of Australia for the Sydney-Hobart Race. Provision of an all-weather “outside” anchorage would greatly influence prospective owners and assist the clubs in their efforts.

* * * *

The very apparent overcrowding of the Swan River with increasing danger to boat users as a result, has become a matter of grave concern to all yacht clubs and to private individuals. The river is eminently suitable for many types of craft and sailing, both racing and cruising, and all types of boating are to be encouraged, providing as they do very valuable healthy sport and relaxation to a large section of the community in all age groups. Many boat owners are willing, and desirous, to sail and moor their craft outside Fremantle Harbour, thus relieving crowding on the river, and adding to boat safety. The obstacle to boat safety outside the harbour—complete lack of safe anchorages—prevents this move.

It is submitted to the Royal Commission that the provision of safe, all-weather anchorages, outside Fremantle Harbour are of paramount importance to small craft safety. They would provide safety to all types of small craft in adverse weather conditions and greatly assist in the prevention of loss of lives
and property. They would help in the enjoyment of healthy sport and relaxation, and would be at all times an asset to this State, and, in times of National stress, a National necessity.

(Trans. pp. 1958-61.)

On the question of finance he stated—

Without doubt the only body capable of financing breakwaters, groynes, and dredging is the State Government . . .

So far as the clubs were concerned, their funds would be needed and expended in the provision of pens, slipways, jetties, etc., when the actual breakwaters and groynes were erected.

(Trans. p. 1961.)

Further information supplied by Mr. Finn relating to the post war period showed that Western Australian yachtsmen had a most impressive record of wins in Interstate Championship events including international classes such as dragon, flying dutchman and sharpie. Wins in the 16 ft. skiff, 14 ft. dinghy, V.J. and other small boat classes have been prolific. At World Championship and Olympic level Australian yachtsmen have had spectacular successes with 5.5 metre, dragon, flying dutchman and sharpie classes, with perhaps the most outstanding of all being the Australian designed and constructed “Gretel” and her challenge in an America’s Cup series. Further challenges are pending in the America’s Cup and the Fastnet, the British blue riband ocean race. These outstanding achievements in sailing by a country with such a small population brand Australians as a seafaring people of no mean ability worthy of encouragement equal to such achievements.

It is evident that Western Australian yacht and power boat owners deserve further help in the matter of the range of their coastwise cruising because of the value of sail and power boat yachting as the nucleus of a maritime defence force, as an economic and social asset, and as a matter of international standing and goodwill. To be able to range the country with such a small population brand Australians as a seafaring people of no mean ability worthy of encouragement equal to such achievements.

A depth of 10 ft. at low tide would be sufficient to float the largest vessels on yacht club registers, or registered as fishing boats, in smooth water anchorages.

A fisherman witness, coxswain Gordon Schramm, gave evidence regarding the necessity for establishing safe anchorages at reasonable distances apart along the coast. He said:

Secondly, that ports be established 50 miles apart all along the coast. They need not necessarily be big boat anchorages like the steamers, but they would be shelter where a boat drawing 8 or 9 feet of water could get in and lay up during a blow.

Can you suggest any suitable places that could be converted on these lines?—I would suggest Dongara, for sure, for one; south of that, or north of Port Gregory, I would leave it to the engineers.

Why would you say that was necessary?—I think the prevailing winds probably this time of the year are onshore. They blow from west, north-west to south-west, and if a boat did happen to spring a plank or get into a bit of trouble and he couldn't punch in to his home port, there would be one north and south that he could make for and it would still be in striking distance.

Do you find it necessary to continue fishing during these bad winter months?—No, I haven’t the last two years; but I can sure understand why some people do. It is purely and simply financial.

(Trans. p. 1506.)

Another witness, coxswain James Bailey, President of the Denison Fishermen’s Association, gave the Commission the following evidence regarding speeds of fishing boats and travelling times:

By the Commissioner: What would be the average speed in the water of these boats you are talking about that operate from these anchorages?—They vary over quite a large range, but I suppose 8 knots would be the average. Some do 15 knots and some only 5 or 6 knots, but the amount of speed you can use in these small boats is governed by the weather conditions that prevail.

You think it better to hop out and get your pots and come back again and save quite a number of hours?—Yes. At the moment I am anchored at Cliff Head, which is only 20 miles from Dongara, but with prevailing northerlies I have to go home against a north-west wind.

I feel this is a needless question, but for the sake of people who have not had the opportunity of studying the position like I have over the last couple of months, what is the necessity for men to fish at this time of the year?—To make money, I should imagine. Last week I caught 1,200 lb. of crayfish which works out at quite a few pounds. It is better to do that than to walk around the streets of Geraldton doing nothing.

It is better for the country?—Yes, it is better to keep working. You have three months in which to get your gear ready.

(Trans. pp. 1502-03.)

On the matter of small boat anchorages generally Captain C. Hartley, Harbour Master at Geraldton, stated:

Except in main ports there are practically no navigation aids for small craft on this coast other than those the fishermen themselves have erected. There
are no plans or charts of the smaller anchorages which indeed have been considered untenable in most cases until the enormous increase in the number of fishing vessels over the past five years has compelled them to spread out over the whole coast. Many of these smaller anchorages require navigation aids, either day markers or lighted beacons and there is an urgent need for charting of many of the anchorages. (Trans. pp. 7-8.)

Entering and leaving until exposed anchorages at night in bad weather poses a constant threat to the best of skippers and their boats. Such working is unavoidable for all deep water fishing vessels operating along the coast north between Fremantle and Geraldton or south between Fremantle and Bunbury and north of Geraldton to the Murchison River. The recognised coastal anchorages used by fishermen and still unlighted, in this stretch of coastline are: Murchison River, Port Gregory, Horrocks' Beach, Drummond's Cove, Denison, Cliff Head, Freshwater Point, Knobby Head, Eagle Islands, Snag Island, Green Head, Fisherman Island, Jurien Bay, Cervantes Island, Green Islets, Wedge Island, Ledge Point, Cape Leschenault, Wreck Point, Yanchep, Eglington Rocks, Rockingham, Safety Bay, Mandurah and Cape Bouvard. (Trans. p. 1896.) On account of the movement of boats from anchorage to anchorage it is not possible to give the number using each one with reasonable accuracy.

**Item 2. Vessels Dumped in Breakers Near Reefs.**

Casualties of this kind make up 24.5% of the total and rank second highest in number. They are usually accompanied by loss of life. The witness McKimmie, Harbour & Light Department Surveyor, made the following comments:

This percentage has increased greatly in recent years due to the greater number of fishing boats operating and fish being harder to get, also the financial liabilities some fishermen have, forced them to attempt to obtain fish irrespective of the risks involved, inexperienced and careless fishermen now take their craft into dangerous waters to find fish and through passages full of hazards which a few years ago the more experienced men would not consider using.

Smaller type craft are the worst offenders in this respect. (Trans. p. 706.)

**Item 3. Vessels Striking Reefs.**

Casualties under this heading make up 15% of the total and rank third highest in number. They are frequently accompanied by loss of life. The witness, McKimmie, made the following comments:

Causes of these losses are similar to previous item, that is, taking craft into waters where a good seaman would hesitate to go. Also included are vessels which have struck reefs due to faulty navigation or lack of local knowledge. (Trans. p. 706.)

Because of the scientific fact that the habitat of crayfish, jewfish and usually snapper is the reef formation offshore along the west coast, reef fishing whether on deep or shallow reefs will continue. No authority whatever would keep fishermen away from fish waiting to be caught during the season.

Mr. McKimmie bestows upon small boats the title of "worst offenders" and he has the information at his disposal to support this judgement. He volunteered the following suggestions:

A great number of losses are sustained by the smaller type of craft. I would suggest that no vessel be granted a fishing licence until it has been policed, a certificate of seaworthiness. This would require some re-organisation as survey certificates issued by the Harbour and Light Department are staggered throughout the year whereas Fisheries Department licences fall due on the 1st of January each year.

I would suggest a total ban on boats under 18 feet in length overall, and boats propelled by one outboard motor. Also in future a minimum length of 25 feet overall be placed on all new seagoing fishing vessels. At this stage it would not be possible to eliminate this class of craft completely as 286 vessels out of a total 850 are under 25 feet overall length. (Trans. p. 707.)

A total ban on boats below a certain length would provide the only reasonably practical method of control which could be policed, that is, by eliminating underage vessels at the survey point or shore base. Perhaps it would be practicable to confine the operations of small vessels to certain areas, e.g., the Abrolhos, or to the inshore reefs, but it would be virtually impossible to police a regulation confining vessels below a certain length to a certain distance off-shore. In the event of a prosecution proof in Court would be a difficult matter. The suggestion that 25 feet would be a satisfactory minimum length for new vessels, or 18 feet for vessels now operating however is completely unacceptable. The evidence, supported by the observation of the members of the Commission, has shown that boats as small as 14 feet can be successfully and safely worked in shallow reef areas, provided that they are seaworthy and in the hands of skilled operators. A seaworthy boat of between 14 feet and 18 feet in length could even have decided advantages of a larger vessel in shallow or restricted waterways.

The seaworthiness of boats and the competence of their skippers and coxswains is already under the control of the Department. Steps will be recommended for catching up with boat owners who avoid annual surveys, or who allow their vessels to proceed to sea in charge of unqualified men. Regulation 37, of the Manning of Fishing Vessels, as it now stands, provides *inter alia*, in respect of a candidate for a coxswain's certificate of competency that:
Cons~erable it was found the "Carol Lee". The crew of three, unknown make up 13 per cent. of the total. In a number of cases of losses attributed to unknown causes it has been accepted as being beyond reasonable doubt that the vessels foundered as the result of overloading.

It seems fair and appropriate at this point to quote extracts from the police report concerning the loss of the vessel "Carol Lee". The quotations follow:

About 1.30 p.m. on 20th November, 1961, George Siggs of 18 Davilak Road, Hamilton Hill, reported to Beaconsfield Police that the fishing boat "Carol Lee" owned by him, with a crew of three, was overdue at her destination at Green Island.

The boat had left Fremantle about 12.40 a.m. 18/11/61 and expected to make the trip in 15 to 16 hours.

Some floats and ropes identified as part of the equipment carried had been picked up in the sea off Rottnest Island.

The boat carried cray pots, timber, corrugated iron, rope, floats, fuel oil, lubricating oil, an 11 ft. dinghy, two 65 lb. anchors and a quantity of food, personal gear and bedding.

Some material, identified as off "Carol Lee" was found between City Beach and Scarborough on the 21st November, 1961 and the Department of Meteorology contacted for advice as to winds, seas and tides to see if the boat would be located if adrift.

Search by Police along coast from Yanchep to Long Point continued to 27th November with negative results, apart from finding of 20 cray pots and 300 ft. rope.

In view of lack of debris found it was thought boat did not strike a reef but foundered in deep water.

The search was called off on 30th November after thorough search by boats, aircraft both R.A.A.F. and Civil, and Police.

On 20th December, 1961 a fisherman named Mills advised he had found a cork float in the water off Rottnest which was attached to a heavy object. He marked the position.

Police skin divers in the Harbour boat "Cormaran" went to locality with Mills and found "Carol Lee" in 55 feet of water on sandy seabed; she was still loaded with most gear, some sheets of iron and cray pots dislodged.

The gear lever was in forward position. No bodies were found.

The boat was subsequently raised and moved ashore.

Subsequent to examination by the Underwater Squad it was found the "Carol Lee" was carrying 85 cray pots which, together with timber, iron and other goods, could have weighed in the vicinity of 4 or 5 tons.

Despite diligent search of sea and coast, no trace was found of the crew members who, in the absence of proof to the contrary, are believed to have drowned on or about the 18th November, 1961 when the fishing boat "Carol Lee" sank.

(b) He must have had no less than 2 years service as deck hand of which one year must have been as deck hand of a vessel proceeding outside harbour limits. Service in respect of the second year would require to be considered satisfactory.

(d) He must understand the management of fishing vessels.

(e) He must have a working knowledge of the compass and be able to steer by same.

(f) Questions relating to local knowledge and seamanship generally will be asked.

These mildly worded provisions give the examiners a wide discretion. To understand the management of fishing vessels; to have a working knowledge of the compass and to steer by same and to be able to answer any question relating to local knowledge and seamanship call for considerable skill on the part of the candidate. The Western Australian Marine Act and Regulations thereunder give surveyors an equally wide discretion in the issue of a certificate of seaworthiness. Provided that examiners and surveyors do not exercise their powers arbitrarily and that they take note of modern developments, they are in complete control of the candidate. The qualifications required of skippers grades 1 and 2 are substantially higher than those required of a coxswain and likewise leave no room for incompetency. It is the duty of the surveyors and examiners to be uniformly strict. The heavy loss of life and property during the last 5 years leaves no doubt as to the degree of strictness required. It is not suggested that there has been any lack of diligence on the part of the technical staff of the Harbour and Light Department. There has been a phenomenal growth in both the seagoing tourist and fishing industries during the last decade, but the Department has been most inadequately staffed and equipped to cope with statutory requirements relating to vessels in use.

It is unlikely that casualties due to swamping by breakers or to striking reefs will ever be eliminated but they may be minimised by capable men, using sound vessels with constant caution and sea sense.

Items 4 and 9. Casualties—Causes Unknown and Overloading.

Casualties under the heading of causes unknown make up 13 per cent. of the total. Mr. McKimmie's comment was——

In all cases it can fairly be said that they were due to the previous three causes and in addition, overloading.

Known cases of overloading make up 1.6 per cent. of total casualties. In a number of cases of losses attributed to unknown causes it has been accepted as being beyond reasonable doubt that the vessels foundered as the result of overloading.
The cause of the disaster is unknown. The boat did not have a compass, steerage was by lights only.

The only assumption which can be arrived at is that the skipper reached open and rougher water sooner than anticipated in a new boat he was not familiar with and was engulfed by waves, being fairly low in the water by reason of the load carried.

Casualties due to overloading have been attributed by witnesses to the following specific causes:

1. The outlet for a leaky self-draining cockpit being lowered to below water level;
2. The same maximum number of wet pots and lines being carried as when the pots and lines were dry;
3. A maximum fine weather load of pots and other gear being carried on a rough day;
4. The weight and/or height of the load adversely affecting the stability of the vessel;
5. The unsuccessful taking of a calculated risk.

Some evidence on these particular matters is quoted hereunder:

Re 1.

By Captain Woodcock: I would like to ask Mr. Travia's opinion as to self-draining cockpits as far as the fishermen are concerned?—I think a self-draining cockpit is a death-trap because it is only a few inches above the water and unless the cockpit is 100 per cent. sealed it is going into the bilge of the boat. The drain is only two or three inches above the surface of the water. The idea is that any water that comes into the boat leaks out, but I doubt if builders can get them that tight. I think some of the water must leak in. In the case of a new boat it is quite possible there is a gap somewhere and the boat would just fill up.

There is another point there: I think fishermen, when they are going to lay their pots load the boat up with pots and very often put their actual outlet for the self-draining cockpits under the water?—That is correct.

From my experience, once they get the deck covered with cray pots without an inch to spare anywhere I am sure they cannot see what is going on with self-draining cockpits?—That is correct. (Trans. p. 35.)

Re 2.

Another thing: yesterday here there was a question asked about the loading of pots on a boat and the different weights. You can put twice the amount of dry pots on your boat as you can pots that are wet. This was some twelve months ago; one of the young fellows down here tried to cart the same load of wet pots as when they were dry, and consequently the boat turned over. He was an hour and a half hanging on to the boat before any fellow came along, and by the time we got there it had gone to the bottom. That was because of overloading, by putting on the same number of wet pots as if they were dry, and it was nearly double the weight. (Trans. p. 158.)

Re 3.

If you have a full knowledge of the weather I think you can take a risk occasionally by putting a good load on provided you have the seamanship behind you to know when this can be done. It is possible to put a load on prior to the sea breeze coming in and when it comes in it hits you so fast that unless the load is properly secure you get into trouble. Once a load shifts you are gone. It must be seamanship that determines how much load you put on. (Trans. p. 1121.)

On rough days we never shift gear. I put 15 pots on my boat, and on rough days we just pull and drop. (Trans. p. 178.)

Re 4.

Overloading of vessels, particularly with deck cargo, tends to dangerously reduce their buoyancy and stability. This is especially the case with boats constructed of bondwood and built in well deck fashion with wheel house forward. These vessels are usually 25 to 30 feet long, 11 to 12 feet beam, of negligible draft with approximately 2 ft. 6 in. freeboard, and with bulk of the cargo stowed abaft the thwarts centre line. Vessels of this type become exceptionally "cranky", so that with a comparatively small side slope or a running sea they become unmanageable, hence they are easily swamped or capsized.

By the term "cranky" I mean that when these boats are overloaded . . . from amidships aft and travelling with a following sea, when a swell commences from the back of the boat and lifts it forward the back of the boat swings on the water and pivots and this, together with the side slope, dips the aft end of the boat. (Trans. pp. 1771-72.)

In my opinion the whole trouble with overloading is the height they load. As you know, if a boat is loaded on the decks, say, two pots high, it gives you good stability, but the higher you go the more sway you get and that is where the danger comes in. I have a 32-ft. boat now and I load 35 pots and the boat does not push down much more than an inch deeper in the water; but if I go four pots high, then I get sway and that is the real danger. (Trans. p. 441.)
Re 5.

It has been suggested that you can overload a boat with outriggers. You can overload a boat without an outrigger; I have done it myself. My boat can take perhaps 30 pots but I have taken 50 on it. I have taken a chance and I have been lucky, but I still use discretion or I take a calculated risk, whichever way you like to term it. (Trans. p. 325.)

There have been cases, as you no doubt know, of boats being lost through overloading. Do you consider that the policing of vessels in regard to overloading should be carried out by the department, or do you think it should be left to individual skippers?—They say the sky is the limit. I think there should be something brought in. As you mentioned, boats have gone down through being overloaded. I myself do not know how many pots I can carry. Perhaps the department should be able to say to me "Cornell, you can carry 20 pots, and that is all." If I carry 30, I should be fined. I have loaded my boat up to save another trip. I will be honest. I have stuck 28 on it three years ago and came through this channel. It was not bad; it is not like what it is today. I often thought afterwards what a goat I was. I think something should be brought in on the size of the boat and the freeboard because as you stated, and we know, overloading has caused loss of boats and lives. (Trans. p. 1543.)

Dr. Sheard has submitted the following interesting facts and theories on overloading:

(i) Transport to Fishing Grounds: Although the number of pots in use by each vessel is now restricted by regulation, their size and shape require them to be carried as deck cargo.

Effects: The weight is considerable and the vessel's trim, particularly fore and aft, is altered.

The free-board wind resistance is increased and unpredictable drift is produced.

Free space on the vessel is restricted and is often insufficient for its proper working, particularly as ropes become unstowed in heavy seas. Life saving devices become inaccessible (and are often left ashore).

(ii) Transport Between Fishing Grounds (or Reefs): The aim here is to re-set the pots, generally within a limited period. Consequently pots are stowed, less with an eye to the vessel's trim but rather to pot accessibility and ease of resetting. The risks here are obvious, particularly when it is realised that the water logged pots are now upwards of 50 per cent. heavier.

(iii) Pot-hauling: The amount of risk taken when hauling pots in reef areas is considerable. Swell and breaking wave incidence and direction is not always predictable, and a vessel's safety when pots are being hauled (from the side) depends on her reserve buoyancy and on her recovery moment. Normally a fisherman is well aware of these factors but if he has other pots aboard, improperly stowed, his safety margin is decreased.

The chief risk occurs when pots become fouled, particularly as this generally occurs under somewhat dangerous conditions. When pots become fouled there is a general tendency either to work toward the stern, or to circle to find a freeing angle. In either case the vessel tends to dip on a stern quarter. Under the wave and swell conditions which exist over reefs and rock ledges it is common for waves and swell to follow out of rhythm, and for water to be shipped at a time when buoyancy and recovery are at a minimum. Good seamanship can avert disaster but toward the end of a day's work that quality is not always present, swiftly. I believe that this risk has been responsible for several of the unexplained boat losses in recent years.

The most worthwhile proposition for control of overloading has been put forward by Mr. McKimmie of the Harbour and Light Department. He suggested the appointment of a person with the qualifications of a naval architect to the staff of the Department to study all plans and specifications of new constructions, calculate stability curves for each vessel and allot the maximum number of craypots to be carried and the height of such loading. He estimated that it would take one person working on stability calculations alone, four years to cover the existing fishing fleet. This suggestion will be embodied in the recommendations contained in the report. It would be possible for the ship surveyors to assist in and expedite the load and height calculations for the existing fleet under the direction of the naval architect.

Other suggestions made by witnesses include the checking of all vessels for overloading at a check point before they leave their respective anchorages, the marking of vessels with load lines, and the allowance of days of grace at the end of the season for lifting and returning craypots to the shore base.

The checking of loads would naturally follow any attempt to curb overloading and would require inspection at sea as well as at anchorages. This matter is associated with the provision of additional staff, and patrol vessels and vehicles for the Department. It is felt that the marking of small vessels with a load line would be of no practical value on account of their tendency to dip and roll in a choppy sea. The allowance of days of grace at the end of the season would be a matter for the Fisheries Department. However, this Commission is of the opinion that the same fishermen who try to shift the whole of their pots on one day would continue to do so, days of grace notwithstanding.
The capable skipper or coxswain will continue to use the trial and error method of load calculation, with the usual application of sea knowledge and sea sense without serious consequences, until official determination of the load limits of his vessel.

With regard to other losses for causes unknown, it can only be hoped that stabilisation of the fishing industry coupled with better training of seafaring personnel, better navigation aids, better shore facilities and better compliance with safety requirements will substantially reduce the tragic losses of ships and men.

**Item 5. Casualties due to Leaky Vessels.**

This cause has accounted for 6.5 per cent of the total losses of vessels. Mr. McKimmie comments:

Leakage has been caused by a number of reasons, i.e., striking floating objects, damage by craypot floats, and sprung seams in heavy seas mainly to fast plywood craft which have driven into big seas at a greater speed than they should be.

To this list of reasons could be added faulty construction. Evidence relating to such an occurrence was given at Dongara by a fisherman, coxswain J. A. Henneberry:

The point I would like to bring up is that my boat was sunk last year in the bay on one rough afternoon. I think it was only just over 12 months old at the time and when I pulled it home and inspected it all the timbers on the side of the boat were nailed together with 1½ in. copper nails. They were not even roved.

It was a sealed-deck boat, a 25-footer, built by a firm in town for the crayfish industry. I have since put the matter in the hands of a solicitor. It cost me about £900 to refit and fasten the boat properly. There were places along the keel, up to 2 ft. where there was not a nail or a screw in it.

By the Commissioner: When you say “in town” do you mean the metropolitan area or in here?—It was built in Perth. I would think that any new boats that are being built should be inspected like a house. When the frame is put up the Harbour and Light Department should inspect it and make sure that the boat is properly fixed and fastened. At the next stage, when the bondwood or planks are fastened, another inspection should be made. Some of these firms are getting on the band-wagon, as one might say, and when the crayfishing was good and everyone was trying to buy and sell boats in an effort to improve ourselves, the quicker they slapped them together the better they liked it. The firm from whom I bought this boat was a reputable firm and I was surprised when I saw the workmanship in it. I saw them and they said, “It is too long in the tooth for us.” I told them I had been risking my life for 18 months with the boat and that all the side of the boat could have given way without any trouble whatsoever. (Trans. p. 173.)

There is very little which can be done about a vessel striking floating objects except constant vigilance by the watch on deck. Unfortunately the seaways of this coast seem to be a dumping ground from the rubbish and waste damage from ships that pass. Temporary man-made obstructions should be removed by the person or public authority responsible for their creation in the first place. The Shark Bay fishermen have complained about temporary markers still obstructing the channel to Useless Loop. In the same category are abandoned jetties and private loading wharves. Fishermen at various anchorages have complained about the fouling of channels and entrances with craypot floats and lines. If and when the Department becomes possessed of seagoing patrol vessels drastic action should be taken to remove this menace and the regulations should bind the Crown.

It is hoped that faulty construction of vessels for both commercial and private use will be overcome if recommendations, which will be made for the enforcement and strengthening of existing regulations, are adopted.

In addition to the study of plans and specifications of new construction by a naval architect, Mr. McKimmie has suggested supervision of new construction. He has also suggested that surveys be carried out only at ports where slipping facilities are available, so that vessels may be inspected out of the water. These suggestions will be submitted as recommendations in the report, to come into effect with the establishment of safe anchorages with slipping facilities. Needless to say the construction and use of slipways is impracticable at exposed anchorages.

The danger of buying ready made boats by description or appearance, was stressed by a witness, fisherman, J. Vitenberg, of Port Samson. He stated:

People that buy boats for their own use buy only light boats suitable for these waters and they should be inspected in Perth or other parts in the South before they are sent up here. People see boats advertised and the price appeals to them, but when the boat arrives here it could be a trap because they are very lightly built and could be a danger to themselves when they are taken out and then other people would have to go and search for them. A person might say, “I will go up to the Island”, or somewhere else, but if any bad weather blows up they could be trapped very easily in a craft of that type.

Have you seen any examples of that?—Yes, I saw one example about three weeks ago with a boat that was purchased from . . . It was about 12 ft. long
built of 3/16th inch plywood. The nails were about a foot apart and it was nicely varnished. I would not step into that boat myself to paddle from the jetty to the shore. Probably the material was first grade, but knowing the conditions around here, the boat was too light. People pay the freight and the tax on these boats bought from the south and they go up into the creek, or out to the islands, and if a strong breeze blows up they could be swamped in no time.

You are all in favour of these boats being surveyed?—Yes, my word: They should be surveyed before they are sold at the other end, because the people up here do not know how the boats are built. The battens are just put together with plastic glue and copper tacks a foot apart and it may look good but it is not safe. That is something that should be looked out from the production side. That is, a survey should be made before they are sold; especially in regard to boats that are sent up here. (Trans. pp. 1681-82.)

Observation during inspections along the coast from Esperance to Point Samson confirmed the truth of this evidence.

**Item 6. Casualties Caused by Fire and Explosion.**

This cause has accounted for 5 per cent. of the casualties. Mr. McKimmie's comments:

By far the majority of cases have occurred on craft driven by petrol engines, caused mainly by lack of care when fuelling, that is, by spilling the fuel into bilges and the carriage of reserve petrol in tins and drums which eventually rust out and back into bilges. Poor ventilation accounts for a small proportion. (Trans. p. 706.)

Evidence taken at all centres has confirmed the danger arising from the use of petrol as fuel without strict accompanying precautionary measures. These precautions, which are listed hereunder, are simple but effective and apply to all liquid fuels:

1. The carrying of the prescribed fire extinguishers in easily accessible positions clear of the danger zone.
2. The complete banning of plastic fuel lines in favour of copper.
3. The fitting of an efficient valve at the fuel tank outlet.
4. The adequate ventilation of all engine compartments to the atmosphere.
5. The carriage of fuel in sound containers or tanks of prescribed material at all times.

It is recommended that these precautions be made compulsory by regulation for all classes of vessels.

Evidence also established that petrol engines properly safeguarded are quite serviceable and, in some cases, have certain advantages, for example, where speed of acceleration and movement are desirable. The inboard petrol engine, the inboard-outboard and the outboard engine are distinctly useful when working craypots in shallow reef areas by the pull and drop method, or deep sea fishing close to shore in habitually rough waters such as on the Naturaliste-Leeuwin stretch of coastline.

**Items 7 and 8. Casualties due to Engine Failure and Stalling and Mechanical Faults.**

These causes make up 4 per cent. and 3.3 per cent of total casualties respectively. Mr. McKimmie's comments, with regard to stalling, were:

Whilst the above is the main reason for these vessels being lost, in most cases it would have been avoided if the vessels had more sea room at the time of failures. No allowance is made for failures such as this, that is, the vessels are in dangerous water before faults can be rectified. (Trans. p. 706.)

With regard to mechanical failures he said:

Engine failures in this item are major engine breakdowns, electrical faults such as flat batteries, faulty starter motors, and also steering gear damage or failure. (Trans. p. 707.)

If the engine or engines and all ancillary appliances were sound and in good working order when the vessel left its anchorage there is little that can be done about guarding against all of the mishaps that can occur in the field of mechanical propulsion. If the engineer surveyor has carried out his duties diligently and if the owner of the vessel keeps the engine and ancillaries in trim between surveys it follows that failures will be reduced to a minimum. Snap inspections would help to keep owners and skippers up to the mark.

It sounds fatuous to say that a good working kit of tools and an adequate supply of spare parts should be carried at all times, or that at least one member of the ship's complement should be able to detect faults and carry out running repairs, but the evidence discloses that all of these features are missing in instances too numerous for complacency. There again, apart from education and sea sense, snap inspections seem to be the only corrective.

Standing out like a beacon is the need for every vessel to have an auxiliary means of propulsion, even oars alone. In the absence of mast and sails, a reliable outboard motor or a set of oars, or both, could propel a vessel out of hazardous waters or a tricky channel. A good anchor and a long length of rope would hold a vessel where there was sufficient sea room. Insofar as these matters are not already covered by the regulations they will be the subject of recommendations accordingly.
Statistics of deaths from accidents compiled in the office of the Commonwealth Statistician are not related to industries and do not include deaths of persons whose bodies are not recovered. Consequently, it is not possible to make a statistical comparison between the fishing industry and any other. Nevertheless, it is a notorious fact that the fishing industry has the unhappy distinction of being the most hazardous of all in the ratio of lives lost to the numbers of men engaged, including the mining and timber industries.

CHAPTER V.—THE TERMS OF REFERENCE.

Part 1.

Reference (a): "the adequacy of the present legislation (including regulations thereunder) concerning seaworthiness of and lifesaving equipment to be carried in the ships and any improvements considered to be desirable."

Briefly stated the present legislation and regulations are inadequate concerning the seaworthiness of and life saving equipment to be carried on commercial ships which proceed outside Inland waters. Substantial improvements are desirable. Nevertheless the majority of the recommendations in this Report will concern the enlargement, amplification and enforcement of existing statutory requirements. Where it is necessary to bring regulations up to date or to prescribe more modern equipment recommendations have been made accordingly.

Concerning private vessels, which proceed outside Inland waters, the desirable improvements are greater, but a very important beachhead has been established by the promulgation of the Navigable Waters Regulations, as reprinted up to 16th December, 1963, and the establishment of a registry of vessels to which these regulations apply. As stated earlier upwards of 8,000 vessels have been registered.

The enforcement of the regulations has been hampered by the inadequate staffing of the Harbour and Light Department, which will be dealt with in the next part of this chapter of the Report, and the difficulties confronting departmental officials in proving allegations in support of prosecutions. The surveyors and inspectors have been handicapped and hampered by the complete lack of seagoing patrol vessels, and vehicles capable of transporting them to isolated anchorages.

It is likely that the regulation making powers contained in sections 17, 204 and 207 of the Western Australian Marine Act will not be wide enough to embody some of the recommendations made in the Report. However, it is a matter which may well be left to the draftsmen at the Crown Law Department if the recommendations are accepted. Some difficulty could be experienced in this regard by the restriction of certain parts of the Act and regulations to "coast trade ships" and "harbour and river ships." The wording of regulation 2 of the Regulations for Swinging Ships leaves some doubt as to whether the regulations apply to fishing vessels. It is generally interpreted by the Department so to apply.

Consideration of statutory provisions relating to seaworthiness and safety equipment would normally divide itself into two parts, firstly, concerning provisions which are now law and secondly, concerning provisions which would be desirable improvements. However, this approach is not practicable in the present case because some existing enactments and regulations are not being enforced, while these and others now existing require slight amendments only to effect the improvements desired. I refer by way of examples of non-enforcement to the controversial subjects of life rafts and two-way radio telephony, covered by regulations 75 and 99A, respectively, of the Survey and Equipment regulations.

I propose now to deal with the various submissions made to the Commission in the order of their discussion by my advisers and myself in private session:

Anchorage.

The importance of coastal anchorages to seagoing vessels has been discussed in the preceding chapter of this Report. Appropriate recommendations will be made at a later stage.

Illumination.

Witnesses have stressed the need for adequately illuminating boat harbours to ensure safety of movement and to guard against acts of pilfering and vandalism committed on berthed and moored vessels. The Police Department is also concerned with this problem which is present at all sea and river anchorages. The danger likely to arise from interference with vital safety appliances or fittings is only too apparent.

Wherever electric current is available anchorages should be adequately illuminated and the Commission recommends accordingly.

Speed of Vessels.

Complaints have been general from witnesses regarding the rapid movements of vessels within enclosed anchorages causing berthed vessels to bump and strain on mooring lines resulting in damage. Regulations 48 and 48A of the Navigable Waters Regulations already provide for speed limits in "navigable waters", which are confined by definition within the 3-mile limit.

It is considered that the speed of fishing vessels within all protected anchorages should be limited to 5 miles per hour and the Commission recommends accordingly.
Auxiliary Propulsion.

Apart from vessels working or travelling in groups, the only effective method of providing for immediate relief in the event of a breakdown in the usual method of propulsion is for the vessel concerned to have on board some auxiliary or alternative means of propulsion. It is recommended that all fishing vessels should be compelled by regulation to carry oars and that those vessels not powered with twin engines or fitted with a mast and sails should be obliged to carry an auxiliary means of propulsion to be approved by the Department on survey.

Unseaworthy vessels—Faulty Construction.

The principal sources of supply of vessels in the first instance are professional or amateur boatbuilders and dealers. Very little trouble is experienced in the case of vessels built to order by professional boatbuilders. Likewise, in the majority of cases, vessels built by amateurs or supplied by dealers are reliable provided that they have been faithfully built to a proved design. However, with amateur boatbuilders there is a tendency to depart from the original design or plan and to ruin good materials with bad workmanship. Dealers are sometimes inclined to effect quick sales, by appearance or description, of vessels which are poorly constructed and totally inadequate for the purposes of the buyer.

In the case of all commercial vessels of 15 tons gross tonnage or larger the application for survey must be accompanied by plans, data and the like to the satisfaction of the Department in accordance with the provisions of regulation 6 of the Survey and Equipment Regulations. All commercial fishing vessels are subject to somewhat similar conditions in accordance with the provisions of regulation 64. Private vessels are not subject to either the submission of plans or to survey under any circumstances, although private motor boats as defined are subject, when in use within the 3-mile limit, to limited control according to "the circumstances for the time being prevailing". It is considered essential in the interests of safety and as a warranty against exploitation that all new vessels, whether for commercial or private pleasure purposes, should be subject to a general regulation requiring the submission and approval of plans and specifications prior to construction or sale and the Commission recommends accordingly. All vessels in the course of construction within the State should be subject to inspection by Departmental surveyors, and approval as to quality of material and workmanship as well as adherence to plans and I so recommend.

Private Vessels.

The case for the imposition of further controls affecting private vessels rests, firstly, upon the number of tragedies which have occurred during the last 5 years, secondly, upon the number of near tragedies averted by prompt rescue work and an element of good luck and thirdly, upon the rapidly increasing number of small trailer born vessels using coastal seaways.

Appendix "D", annexed hereto, is a list of such tragedies which have occurred since January, 1950. Rivers and estuaries have not been excluded because the perils of a large arm of the sea are similar to those experienced off-shore. A choppy sea of a swift flowing current is a hazard to a small, overloaded boat wherever such conditions may occur.

At every place where evidence was taken witnesses related experiences of pleasure boats in distress. Evidence relating to some of these experiences is quoted from the transcript.

Coxswain T. H. Money of Denison, fisherman, stated:

To my way of thinking there should be jurisdiction over those to stop them going out owing to the tragedy down here some time ago. They go out at all hours of the night, in dinghies of perhaps 14 ft. or 15 ft. with three or four men in them; and when these men swamped and they wanted to undo the engine, hence they found out that the engine screws were that rusted. They had never been turned since they put the motor on, and consequently they couldn't take the motor off; and this ended in the drowning of one man and caused a lot of inconvenience not only to some of the locals but also to the police force and to anyone else. I think the legislation should be brought in to police that, to have some jurisdiction over the small boats. (Trans. p. 157.)

Coxswain, C. V. Carter of Lancelin, fisherman, stated:

There is one little thing I would like to see; A bit of restriction on amateur fishermen. The last time a chap got drowned here there were 22 boats anchored in the bay, all capable sea-going boats, and not one of them left its moorings; and the skippers of these boats are experienced. These other fellows come up here and get aboard and away they go. One of our boats went out and picked up the dinghy and pulled it in. He took the risk of losing his boat, living and life, because of some fellow going out in a dinghy where he should not have been.

You say the fishermen never left their moorings. Was it on account of the wind, or a heavy swell, or what?—At the time we had had five days of sea. They were quite good days with no wind, but a sea. (Trans. pp. 286-7.)

Rear Commodore T. A. Hansen of the Cruising Yacht Club, Rockingham, stated:

I have had occasion to assist quite a number of people in the past. There was an instance three or four years ago when five spearfishermen were at Garden Island. I was there at the south end of the island. The sea breeze comes in
strongly during the summertime and we decided to come home. We looked back and could not see the spearfishermen. We knew they were coming too, so we went back. Their boat had capsized and they were in the water; and I feel pretty sure one or more could have perished in that accident if someone had not been there to do something. It was a hired boat probably licensed to carry three, but it had five on board together with their spearfishing gear, and an outboard motor. I presume the boat swamped and capsized; and if no-one had been there they would have had to swim for the shore. This was in the passage off the south end of Garden Island. (Trans. pp. 408-410.)

Skipper grade II, G. K. Smith, fisherman of Busselton stated:

I fully agree that pleasure craft should be policed the same as we are with regard to safety precautions. As Mr. Harris said, you get up in the morning and find it is not suitable to go out to do your own work, but in the finish you have to go out to look for some other silly fool who has gone out regardless of the weather. The day two were lost, I brought one boat in. We went out twice that day searching for them in conditions under which we would not normally consider going out.

What was the wind?—South-west, gale force.

By Mr. Napier: What type of boat?—An 11-ft. very low bowdoin dinghy. They were last seen one mile off shore about 4 miles down at 7.30. No-one contacted us until about 11 o'clock.

By the Commissioner: At night?—No, a.m.

How many were there in the boat?—Two. They asked us to go out and we went out in the 41-ft. and covered the area where they were last seen and there was no trace of them. We came back but we were asked to go out again about 8 o'clock in the afternoon. I knew that unless we could run right on to them we would not find them. I knew the dinghy could not live in it, but I thought they could perhaps be hanging on to it, and unless we ran right on top of them we could not see them because once you get 3 miles offshore the water is so turbulent you cannot see very far. We went out about 10 to 12 miles and I knew it was hopeless. We turned to come back. It only had grappling and 20 ft. of anchor rope. All of them should have at least 15 to 20 fathoms of polythene or good sisal or nylon rope. If anything does happen they can hang on till someone gets them.

Where was the boat found?—The boat was never found. From the direction it went I think it would be between Bunbury and Mandurah and probably went to pieces in the sea. (Trans. pp. 555-556.)

Coxswain A. F. Horner, fisherman of Augusta, stated:

I have noticed that over the last two years since the advent of the high-powered motor there are more and more fellows going out and they are getting cheekier all the time. They are now getting 5 and 6 miles out with 12-ft. power boats. Up to date there have been no major tragedies but plenty have been swamped out in the bay and plenty have been towed in. Last Christmas there was a husband and wife, a baby and two children out in a 12-ft. boat in a decent old westerly and they got swamped a mile off Flinders. Fortunately they were seen and were towed in before any fatality occurred. But the major problems are the ones which are going out 5 and 6 miles in 12 and 13ft. boats with high-powered motors. During Christmas you often strike some very nice calm days. They do not have a barometer but on a calm day a low barometer invariably brings a hard westerly. If they have no power they have nowhere to go. I would like you to have a look at the coast from Flinders Bay. You will then realise what I mean. If they run out of power between the island and the coast you have nowhere to go so you go straight down offshore. That is why I think there is going to be quite a problem with the smaller boats. I have no solution. You cannot police it in small places. I do not know how you would go about it. I have thought about it quite a bit. In a few years' time it will a full-time job looking after these people. (Trans. p. 564.)

Coxswain I. W. Overton, fisherman of Flinders Bay stated:

By the Commissioner: Have you had any experience with amateurs in trouble?—I have seen them in trouble—In two or three who nearly got drowned at Flinders Bay five or six years ago. That was purely and simply through overloading a small boat. A chap and his wife and his son and his wife and three little children went out and they were turned over just outside the entrance. A chap by the name of Thorpe went out and brought them in. The old chap was very distressed and I did not think he would make the grade.

How about the children?—They were all right. The younger people were able to support them on the keel.

By Mr. Napier: They would have all drowned had it gone to the bottom?—Definitely; every one of them.

By the Commissioner: What was the size of the boat?—About 14 ft.

How many people were there altogether counting men, women and children?—Seven. (Trans. p. 599.)
Fisherman N. K. Swarbrick, of Emu Point, stated:

The year before last one man came down—we knew him from Perth—and said that he had built a good safe bondwood for his two children and that evening they were going out speargfishing. He got into this "good, safe" bondwood, but he didn't like the feel of it and so he hung on to a launch until he was on board. Anyway, the boat tipped over and he lost his wallet. He was very lucky that he didn't drown himself. That's going on all the time. We feel that no bondwood should be allowed to be built unless it is built to a specified Harbour and Light plan. I'm positive that something must be done. People say that it's another license that you must pay; but that's nothing. You pay for a car license. You get your driver's license. That's the law and that's it. I think any man would be in favour of something being done. It should be done. We have a little bondwood at home. It's 11 ft. 6 in. We take it down the coast. Last winter, at Cheyne Beach, one load brought ashore two men, both heavier than me, and 1,363 lb. of shark in one lift—and it's 11 ft. 6 in. long: But some of them come down, and you have to part your hair in the middle to sit in the boat; but they still go merrily on their way. My father had hire dinghies for many years. They are extremely good boats. They were licensed, and on each boat is printed the number of passengers it is allowed by law to carry; and I think that should also be done in the case of the bondwood. A certain length should have a certain number of people, and they must abide by it, and they must carry a certain amount of life-saving equipment. (Trans. pp. 636-7.)

Guest house proprietor J. T. Swarbrick, of Walpole, stated:

I realise you gentlemen seem to be mainly interested in the sea, but I feel on this coast it is a little different from Fremantle and Geraldton because we have estuaries with big sheets of water—and it is deep water. This applies also to Denmark and the Albany Harbour. We get big seas. So the inland waterways offer a different problem to what they do up that way. A couple of years ago I came on the scene and saved a tragedy which would definitely have been fatal; and only about a year or so before my father did the same job in this estuary. The one I saved was a little cockleshell of a boat as big as a "VJ," but not decked in. Four people were in that boat, which foundered and turned over because it was overloaded. One of the chaps I pulled out could not even grip my hand and in about another 10 minutes more he would have been drowned.

Were there any children?—There were two lads about 13 or 14 years of age. (Trans. p. 658A.)

Aerial survey contractor K. L. Watson of Wembley representing the Amateur Fishermen's Association of Western Australia stated:

At the moment you just register a boat and you are free to take it to sea and to use it as you think fit. This practice has led to incidents on our coasts which are probably one of the main reasons for this inquiry. I could quote an example. Last year, at Marmion, on one very gusty easterly morning, club members refused to go fishing. We brought our boats up on to the beach and we waited for the wind to die down. It didn't so we didn't go fishing. Three young people—two boys and a girl—launched a bondwood boat from the beach. They were asked not to go out, but they did. They had an outboard motor, but no oars, no bailing tins, and no anchor rope. The obvious thing happened. They were out for about 10 or 20 minutes and they had a breakdown; and they drifted out to sea. One lad jumped overboard and tried to swim ashore when he was about 1½ miles out. By that time we had noticed their plight and they were close to 2½ miles out to sea. Two of our boats went out to rescue them. The conditions were very bad. It meant that four members—there are two men in each boat—had to endanger their own lives to go out and rescue these people. As it happened there was a professional fisherman out there and he got to the boat before we did. (Trans. p. 1102.)

Skipper grade II, Frank Miragliotta, fisherman of Palmyra stated:

There was one incident at the Stragglers. A fisherman came to me and said there was a boat out. It was a rough day and there were no other boats out. My boat is small but I towed that boat in. I got out there and there was no soul anywhere. I could not get too close to the boat because of the reef. I could not see anybody on board the boat which was about 500 yards from the Stragglers and drifting on to the Stragglers. All of a sudden a hand came up over the combing and then his head came to light. I said, "Have you a towline?" He just dropped back into the boat. The chap I brought with me successfully, either by a fluke or by the will of God, threw a lasso on to his bollard and we pulled this boat ashore. When we got there we found there were five men on board. Incidentally, the rope they had over the bow had an anchor at the end of it which did not reach the bottom although it was only 5 fathoms of water. When we got to the Fremantle Fish Markets they did not have a rope to tie up the boat with so I gave them a rope which I had on board. They thanked me, and the next day the boat was gone, with my rope, too. (Trans. p. 1762.)
Finally, Naval Architect, L. A. Randell, of Applecross; said this of private pleasure craft:

I hate to say this but I think there should be some form of control. As a private boat owner I am against too many controls, obviously; but I think we have to do something for the safety of the individual. In the U.S. the coast guard does all this. They do have by-laws laid down for each and every boat which is sold. He has to carry certain regulation equipment and each boat actually has stamped on it its loading capacity in pounds. Each boat is given a certain loading rating which under law cannot be exceeded. There is no actual way of policing that, I don't think. If, say a 16 ft. runabout is certified to carry 1,200 lb. dead weight, then it would be sold as such. But there is nothing to prevent the mother-in-law coming along and hopping on board and making it 1,500 lb. when they are ready to go to sea—or 1,400 lb! I don't think we could police that one; but I do think that if any regulation is considered concerning these small boats, it should be based on, firstly, structural design excellence, which could be done at the initial stage by the overall authority.

Provision of buoyancy apparatus sufficient to float the motor—the people would already have got their life-jackets on, we presume—and a certain maximum loading capacity, the same as is done with the licensing of boats that apply for hire. They are licensed for a certain number of people. We have a set-up now by which certain boats have to be licensed. If any legislation is thought of, it should be based on that capacity; and with the larger craft, some of which do not belong to yacht clubs, either we are going to ignore the fact altogether, or they have to come in on this provision of plans for building. If it is good enough for fishing boats, then it is probably good enough for pleasure boats; because you could probably lose just as many people going to sea in rubbish. I think, boating, generally, is just starting to gain momentum in Western Australia.

It dates back to the lifting of import restrictions?—Yes.

Mr. Napier: I took out some figures, or my department did for me, in the last two weeks, and, as I said earlier in this hearing, to date there has been, since 1960, 20 lives of professional fishermen lost, and in a very little longer period—from the middle of 1959—there have been 21 deaths in private craft.

By the Chairman: There have been some frightening near-misses, too?—I realise that. I have seen several of them. Even though I do not like to make regulations to control a man's sport, I think they are definitely necessary. Policing is, in my opinion, virtually impossible on our coast line from the pleasure boat point of view, except at the recognised launching places, anchorages, and what-have-you. But if the boats themselves and their required equipment are laid down, surely that must at least minimise the danger. (Trans. pp. 1846-48.)

The Commission realises that there should be a minimum of interference with the liberty of the individual and the enjoyment of his leisure hours. It is felt that the safeguarding of his life as well as the lives of his family and friends does not interfere with his liberty or enjoyment. The loss of life in boating accidents is serious and tends to become worse progressively. The Commission feels that to make boating safer will tend to assist the holiday-maker in his pursuit of happiness in a climate and on a coastline such as ours.

There is no present need to impose further restrictions upon members of yacht clubs or other aquatic sporting bodies who are well able to educate and discipline their own followers.

It is now proposed to deal with further safety precautions considered necessary in respect of both commercial and private vessels.

Lifesaving Equipment and Precautions.

The following submissions were written by one of my Advisers, Deputy Commissioner of Police, Mr. R. T. Napier, after consultation with myself and the other Advisers. His submissions are amply supported by evidence given before the Royal Commission, coupled with his own experiences as a senior police officer and member of the Search and Rescue Organisation. I concur with his submissions and the recommendations contained therein, and add my own recommendation that they be adopted in toto. I have found it necessary to add certain comments of my own, together with recommendations concerning matters not dealt with or dealt with only in part by Mr. Napier:

The existing legislation under the West Australian Marine Act is fairly comprehensive but could be improved by amendment to force all skippers of vessels referred to in Regulation 75 (3) of the Regulations to the Marine Act (Survey and Equipment) to carry inflatable or rigid type life rafts, of an efficiency conforming to Australian Standard Specifications or a similar standard, as it is considered there is far too much equipment of this sort being sold sub-standard, thus creating a hazard to life, rather than a safety precaution. The existing legislation requires approved apparatus but I suggest it should go further and be in accord with a Standard.

Smaller type vessels could also carry the above, where possible; there are some types of inflatable rafts in fairly compact containers, suitable for the purpose. Alternatively, in lieu thereof, boats under 25 feet should be fitted with...
an approved buoyancy material which prevents sinking, such as polyurethane, around the structure to enable it to be used in emergency as a raft or assistance to safety, together with life belts or jackets, also approved according to a standard specification.

The Harbour and Light Department should refuse to permit the use of life saving equipment unless it bears the Standard Specification number, and by publicity try and install in retailers a duty to sell none but approved equipment.

During the hearing of this Commission it was frequently stated in evidence that it was a simple matter to obtain a Fisherman's licence from the Fisheries Department without any request by that department for the production of a certificate of seaworthiness of the boat. Under Traffic Laws a motor vehicle is not allowed on the road in an unroadworthy condition, and a driver is not allowed on the road without some test. I therefore strongly recommend that the Fisheries Act should be suitably amended to make it mandatory for a Survey Certificate of seaworthiness from the Harbour and Light Department to be produced for the boat to be used as a fishing vessel prior to the fishing licence being granted. A driver can walk away from his vehicle involved in a road accident; a person at sea cannot do the same in the event of bother or the sinking of a boat.

In this connection the Fisheries Department appears to adopt a very indifferent attitude towards the lives of fishermen. The department does not appear to worry much whether a vessel is seaworthy or not, and in my opinion has a very poor attitude towards life at sea. The evidence of the Director of the Fisheries Department at folios 1898, 1899 and 1900 bears this out. I am firmly of the opinion that there should be greater liaison between the Fisheries Department and the Harbour and Light Department in regard to the use of unseaworthy vessels. If boat owners, such as fishermen, know they must produce a certificate from the Harbour and Light Department before a fishing licence will be granted, they will see that their boats are in good order.

In addition to hand flares, it should be compulsory to carry rocket flares, or a Verey pistol and cartridges, for use in emergency. The hand flare is not too satisfactory. An excellent rocket flare was demonstrated during the sitting of the Commission. Dye markers should be compulsory as well as a Heligraph mirror.

All boats proceeding to sea should have to carry at least two emergency floating smoke signal canisters to be used to attract attention as flares, in addition to N. & C. Distress Flags, particularly in daytime. These smoke signals prove a valuable piece of equipment in war time and tests carried out during this Commission showed they would be of decided advantage to attract sea or aircraft to the rescue. For this purpose I recommend Clause (t) of Regulation 83 be included under Regulation 70 as sub-regulation 2(a).

The Harbour and Light Department could inspect all this gear at the annual inspection, or on snap inspections, and regulations should permit any vessel not properly equipped to be refused a licence; or ordered to shore if so licensed and found at sea without essential safety gear and, if necessary, action taken under Section 195 of the W.A. Marine Act for suspension of the licence. This may need amendment by deletion of the proviso to the section; see also Regulation 30(2).

The provision regarding the carriage of a suitable and correctly adjusted compass should be rigidly enforced except where, in the opinion of the department, it is not reasonable. In this connection it is suggested permanent, qualified compass adjusters could be attached to the Harbour and Light Department to test compasses at annual surveys, thus saving some expense to fishermen who now have to arrange for qualified compass adjusters to travel to where their boats are anchored.

With the advent of the pleasure boat and out-board engine, now used both in placid sheltered waters and at sea, it is strongly recommended that consideration be given to some form of control over the owners by restriction to survey for seaworthiness and for carriage of essential safety equipment, and also for advising the number of persons who may be carried, similar to existing provisions relating to hire boats. An appropriate licence fee could be charged in lieu of a registration fee.

Many tragedies and near tragedies occur through overloading these privately owned boats. It should be compulsory for each boat to have displayed, in a prominent position, the number of persons permitted to be carried, and the Harbour and Light personnel should be authorised to supervise, advise, caution, order ashore or prosecute persons carrying more than the number prescribed.

To assist in policing such regulations, fast motor boats trailer borne for use anywhere, particularly in the more popular holiday resorts, should be provided for the Harbour and Light Department, to enable snap visits, patrols and inspections. This particular matter is further reported under Clause (6).

Whilst many witnesses stated that the Harbour and Light Department gave good service many others said they considered insufficient time was allowed
for a full, detailed inspection, both interior and exterior, of the vessels as to its seaworthiness. I consider it essential that every boat used in the open sea should receive a thorough inspection of craft and equipment, preferably on the slips. This would appear to necessitate more staff to cope with this work and additional slips to enable thorough inspections to be carried out.

I recommend a regulation be promulgated numbered 66A causing a photograph of all vessels (postcard size taken from abeam) be submitted to the Department at survey time initially, and a further photograph if any structural alterations take place.

I recommend that Regulation 99A (2) be amended by addition of the words “or unreasonable” after the word “impracticable”. It is possible that it be practicable to put a wireless in some type of boats but unreasonable to enforce it for some good reason. For example, a boat which never works out of sight of land.

I would also recommend legislation to debar professional fishing boats proceeding to sea, if of a lesser length than 14 ft., and amateur fishing boats not be of a lesser length than 10 ft.

It is recommended that all safety gear on boats should bear the distinguishing number of the boat to obviate interchange between boats—for the purpose of avoiding supply of such gear.

The Standards Association of Australia has issued a booklet relating to standard specifications for reinforced plastic boats entitled “Australian Standard F3-1962” (Exhibit 47—Perth). The minimum requirements for these vessels include a rule (No. 1.16) that the boat builder shall affix to each boat a plaque bearing the following information:

(i) Serial number,
(ii) Builder’s name and/or trade mark,
(iii) Recommended maximum passenger capacity,
(iv) Recommended brake horse-power capacity,
(v) Boat weight capacity,
(vi) The number of this Australian Standard, i.e., AS-T3.

This Commission considers that such a plaque should be affixed to all vessels constructed of any material whatsoever and used solely for pleasure, by the builder or dealer supplying the vessel, upon completion of construction, and recommends accordingly. It would naturally follow that the information be determined by the methods laid down in the booklet.

The plaque should have the effect of forewarning the intending purchaser if the vessel is too small for his requirements and also of providing at least a warning against overloading or overpowering by users.

To enlarge upon Mr. Napier’s submission that boats under 25 feet should be fitted with buoyancy material, it is well to mention that regulations 28 (4) and 43 of the Survey and Equipment regulations already provide for airlight buoyancy tanks for some classes of vessels. It would now be desirable to add a new sub-regulation (5) to regulation 75 providing that, in respect of boats under 25 feet in length, the fitting of an approved type of foam buoyancy material in an approved manner sufficient to float at least 25 per centum more than the weight of the boat, crew, machinery, engine, and other equipment, would be sufficient compliance with the regulation. The evidence disclosed, beyond doubt, that if all of the lost vessels had carried life rafts or if they had floated when swamped, the lives of most of the persons on board would have been saved. The Commission recommends accordingly.

A raft should be so placed on a vessel that it will float free in the event of the vessel sinking, but it should be attached to the vessel by means of a light line so that it will not race away in a strong wind or turbulent sea out of the reach of survivors. The placing of a raft and the method of attaching it are matters best left to the surveyors. I recommend accordingly.

The evidence before the Commission has confirmed the opinion of members that it is impossible for one man to handle a vessel of 25 feet in length or over. It is recommended that any vessel in that category be manned by more than one person at all times.

In order to give practical effect to the opinions already expressed regarding added safety precautions concerning private pleasure boats the Commission recommends that the Navigable Waters Regulations be amended, firstly, by amending the definition of “navigable waters” to include all waters off the coastline of the State and secondly, by including, in addition to the regulations already recommended in the foregoing pages, the following:

(i) That all “motor boats” as defined be subject to survey as prescribed for commercial vessels of similar size, from time to time by and at the discretion and convenience of the Department, after notice, and that pending such survey the vessel be permitted to be used for the purpose for which it was intended, all other statutory requirements having been compiled with.

(ii) That on survey the Department prescribed for the vessel—

(a) the load limits in respect of persons, gear and equipment,
(b) the power limits on engines,
(c) the minimum safety requirements not already prescribed by regulations 52, 52A, 52B and 52C.
Compasses.
To enlarge upon the submissions of Mr. Napier relating to compasses it is recommended that all the regulations relating to compasses be overhauled and that the departmental technical officers be given power in respect of the following matters:—
(i) To exempt any vessel from the provisions relating to compasses where the carrying of a compass would be impracticable and unreasonable.
(ii) To determine the size of the compass and the position where it is to be placed, upon initial or periodical survey.
(iii) To prescribe that, in addition to a standard compass, a Pelorus compass be carried where it is necessary for the safe navigation of the vessel having regard to the nature of its operations.
(iv) To prescribe where crayfish pots or other loading be carried on the vessel in relation to the standard compass.
(v) To decide when a ship shall be swung and a deviation card issued from time to time, being not less than once in every three years.

The evidence of Capt. J. Watson, given upon his second appearance as a witness before the Commission, is annexed as Appendix “E” for the guidance of all interested persons in determining the abovementioned matters if required. (Trans. pp. 1946-57.)

Dangerous Equipment.
A number of witnesses stressed the danger accompanying the use of nylon type rope because of its tendency to float and become hopelessly entangled in propellers. The position should be watched by the Department.

The danger accompanying the fitting of outriggers to the stern of vessels has also been stressed by witnesses. This attachment plays a part in overloading and also tends to lessen the stability and steering qualities of a vessel. It is recommended that no outrigger be allowed to remain on a vessel, or to be fitted, without the approval of the Department on survey and, if allowed, that it shall be of approved size, construction and design.

It is certain that self draining cockpits, associated with overloading of the vessels, have contributed to a number of casualties in the fishing industry. Furthermore the construction of a vessel with a self-draining cockpit tends to interfere with the ventilation of inboard engines. It is recommended therefore that self-draining cockpits be banned in all fishing vessels so constructed as not to have completely watertight decks or on those powered with inboard petrol engines not independently ventilated to the atmosphere.

Pumps.
Pumps are such elementary and necessary pieces of machinery to have on board sea-going vessels that it does not seem to have occurred to anyone adequately to legislate in respect of them, or it may be that surveyors are constantly on the watch for any deficiencies. However, some evidence has been given relating to the inadequacy of pumping equipment on fishing vessels. It is recommended that new regulations should be framed relating to all sea-going vessels providing for both mechanical and hand pumps of approved number and design, subject to the discretion of the surveyor where it is not practicable to fit a mechanical pump.

Navigation Equipment.
While the existing regulations provide for the carrying of compasses and barometers, as well as lead lines on the larger vessels, there is no provision for the carrying of charts, parallel rulers or dividers.

If a skipper is obliged to lay a compass course in the progress of his operations it follows that he should be provided with a chart covering the area of his operations and the other equipment necessary to find the course. The evidence discloses that the charts of this coast are notoriously incomplete and even inaccurate in some cases. It is very important that any vessel operating in unfamiliar or badly-charted areas should be fitted with an echo sounder or carry a hand lead-line of the kind prescribed by regulation 19 (c).

It is recommended therefore that all commercial or fishing vessels should be obliged to carry a chart of the area of operations and all of the equipment necessary to lay a course and to find distances and depths of water, at the discretion of the Department unless it is impracticable or unreasonable to do so.

Manning of Watches.
It is probable that vessels and lives have been lost because the sole person on watch has gone to sleep or has become otherwise incapacitated. It is possible that a sole man on watch could fall or be swept overboard. The Commission recommends that all vessels under weigh, other than one-man vessels, should carry at least two men on watch at all times.

Safety and Distress Equipment.
In addition to the recommendations embodied in Mr. Napier’s submissions it is recommended that the following amendments be made in order to bring existing regulations up to date to clear up legal doubts and to effect improvements:—
(i) That all references to manilla anchor rope be extended to include as an alternative approved nylon type rope of at least half the specified circumference of the manilla rope.
(ii) That in all cases 60 fathoms be the minimum length of anchor rope required to be carried.
(iii) That where the carrying of life-buoys is prescribed at least one be fitted with a self igniting light.
(iv) That regulation 70 (1) of the Survey and Equipment regulations be amended to provide that vessels under 15 tons carry 3 rocket signals and vessels of 15 tons but not over 50 tons carry 6 rocket signals.

(v) That all commercial and seagoing fishing vessels be obliged to carry sufficient food and water, to be maintained in good condition, to support all persons on board for three days.

(vi) That the provisions of regulation 28 (22) of the Survey and Equipment regulations which relate to the carrying of a suitable and adequate supply of tools, be extended to include spare parts and to apply to all vessels.

(vii) That the provisions of regulation 24 of the Survey and Equipment regulations relating to local limits and hours be extended to fishing boats under 20 feet in length.

(viii) That all seagoing fishing vessels of not less than 20 feet in length be obliged to carry a log book in a form to be prescribed by the Department and to keep the same entered up to date. Provided that the Department may in writing exempt any vessel from carrying a log book where it would be impracticable or unreasonable.

The foregoing recommendations and all others made in this part of the Report are supported by the weight of evidence based on practical experience of members or ex-members of the armed forces, master mariners, fishermen—professional and amateur, business men, members of aquatic sporting bodies and participants of ocean yacht races. The evidence is supported by the results of practical tests carried out in the presence of my Advisers and myself with the safety equipment discussed, displayed or thrown from surface craft, or from the Commander Rescue aircraft of the Department of Civil Aviation.

PART 2.

Reference (b) "the ability of the Harbour and Light Department effectively to administer such legislation and improvements thereto, and to take Court action thereunder, having regard to present staff and legal requirements and what further staff and facilities (if any) should be made available to the Department for such purposes;".

Again I concur with the written submissions made by my Adviser Mr. Napier and I recommend that they be adopted in toto. As before I have added certain comments and recommendations of my own.

It is strongly recommended that the Harbour and Light Department be increased by the addition of more supervisory and examining staff to enable a proper survey of all vessels and their equipment, and to enable apprehension of those who, there is no doubt, purposely avoid the surveyors and payment of fees, and use unseaworthy boats without proper safety equipment, thereby endangering not only their own lives but also those who proceed to their rescue in time of distress.

It is suggested that a competent compass adjustor, or adjustors, should be employed by the department to check and adjust compasses at survey times. The value of a correct compass was amply illustrated on several occasions during this Commission. Whilst provision of a pelorus would be useful, this is a very costly item and may have effect upon compulsory supply.

It is recommended, if not already in operation, that the owners of all boats subject to survey should be posted a notice of survey at least three or four weeks ahead of the due date, advising the place, date and time of the annual survey; and a heavy penalty apply for failing to comply. This will necessitate additional staff on the clerical side to enable proper recording and the issue of such notices and licences.

It is considered the Harbour and Light Department is badly understaffed and although competently doing work within the limits of the existing staff, is not competent to carry out all the work required, or to apprehend offenders breaching the regulations. For this purpose it is strongly recommended that, in addition to more staff, the department be granted at least two high speed, ocean going patrol craft, suitably manned with efficient, trained personnel, to enable movement from place to place as required in the interests of the department, checking equipment by way of snap inspections at sea, apprehending— at sea—vessels not properly surveyed, ordering ill equipped or unseaworthy vessels to shore; and have the requisite clerical staff to cope with the increased commitments.

The patrol craft could be used as search and rescue craft in instances of distress or disaster at sea, and also placed at the disposal of the Police Department, as required. For this purpose it would be of decided advantage to have Harbour and Light Department patrol boats fitted with wireless and able to communicate with Police V.K.I. radio station in the event of emergency requiring their use, either for the individual departments, or jointly.

This portion of the references could be read in conjunction with Item (d).

The Harbour and Light Department is encountering the same difficulty in marshalling sufficient facts to support a prosecution as the Police Department would encounter.
if it were not for the existence of section 69 of the Traffic Act. Mr. K. G. Forsyth, the Manager of the Department made the following statement at one of the sittings of the Commission after a witness complained about fishermen operating without certificates:

Mr. Money raised the question of men operating without certificates. The law says—and the Crown Law Department supports it inasmuch as it will not take a case—that a man must be seen navigating a vessel. It is not a matter of co-operating with the Fisheries Department because that department will give us a copy of their returns proving that they brought crayfish in and put them through the processing factory, but that will not be accepted by law as proof that that man operated his boat. The legal people will tell you that he could say that he did not operate his boat, but that someone came and put them on his boat and he merely came in and put them on the shore. That is what is put to us every time we try to take a case against a man who we know is operating the boat without a licence. Many fellows are dodging that because they know that inspectors are about and they disappear from one place and turn up at another place. (Trans. pp. 160-161.)

Mr. P. Armstrong, also an officer of the Department made the following statement:

The wording of the Act is that "no vessel shall be navigated" which means that I have to be on the beaches any time between 9 a.m. and 5 p.m. to actually see them under weigh. With a two-man patrol, two beaches in close proximity could be worked together. Sections of the Marine Act need overhauling. I quote the case of the "Marlon" which was adrift with starter motor trouble during August, 1963. The man in charge did not hold a coxswain's and Engineer's certificate and was in fact awaiting prosecution for a similar mangling offence from December, 1962. The vessel was not licensed with the Fisheries Department. I personally took the file to the Crown Law Department and was advised that all evidence was purely hearsay and could not be accepted. My only recourse was to gain an admission by averment of ownership and licensing. Should the processor that he has been supplied with fish. The processor is very reluctant to do this and so the prosecution action cannot be proceeded with. The processor is naturally on the side of the fishermen. In fact two years ago it was reported to the department that a processor was offering £50 for a certificate man to take a vessel to a coastal anchorage and then hand over to a man without a certificate. (Trans. pp. 730-731.)

The procedural section of the Western Australian Marine Act relates only to proof by averment of ownership and licensing. It should be enlarged to bring it into line with section 69 of the Traffic Act by including:

(i) the fact that a person being required to hold any particular certificate under the Act did not hold such certificate;

(ii) that fish found in the possession of any person or in any place under the control of a person have been caught for sale;

(iii) that any person has navigated a vessel or that any vessel has been navigated within the jurisdiction.

I recommend accordingly.

With the price of one bag of crayfish to a fisherman being upwards of £20, the maximum penalty of that amount for a breach of the regulations is far too little. It is the opinion of the Commission that the maximum penalty for navigating a vessel not having a boat licence, or a certificate of seaworthiness, or not properly manned, should be raised to £100 and that a minimum penalty carrying suspension and/or disqualification for a first and each subsequent offence should be fixed, after the manner of section 32 (3) of the Traffic Act, with a provision for removal of the suspension or disqualification after the manner of section 33A. The Commission also considers that in all other cases the minimum penalty for a breach of the Act or regulations should be £ of the maximum. I recommend accordingly.

During the course of the Commission it became apparent that probably nobody on the staff of the Department was thoroughly familiar with the provisions of the Western Australian Marine Act and Regulations thereunder. I recommend that one capable officer be appointed as a legal clerk, with a suitable classification, to familiarise himself with all of the statutes and regulations administered by the Department and to prepare a composite index of the same. In the meantime the matter of consolidation should be taken up with the Crown Law Department. The legal clerk should be in charge of the preparation of all briefs for prosecution.

The Department should seek a ruling from the Crown Law Department, if it has not already done so, concerning the effect of regulation 67 (i) of the Survey and Equipment Regulations. It appears to be the
opinion of officers of the Department that the effect of the first part of the subregulation down to “equipment to be carried” is to bring fishing vessels within the scope of all other regulations relating to equipment, whether or not such vessels come within the description or classes to which the other regulations relate. I do not agree with this interpretation.

Further references to patrol craft will be made in dealing with reference (d) of the terms of reference. There is also a pressing need for suitable vehicles to be provided for the staff upon matters discussed including plans approval and loading determinations.

The following evidence was given by Mr. McKimmie in relation to the respective responsibilities of Commonwealth and State in the matter of the lighting of the coast:

In reference to the dividing line between Commonwealth and State in the matter of erection and maintenance of lights along the coast as aids to navigation there is no clear definition of policy in this regard.

In the past we have always understood that port lights, i.e., lights within the boundaries of a port were the responsibility of the State through its various Port Authorities and ocean route lights were the responsibility of the Commonwealth through the Department of Shipping and Transport.

However, recently the Commonwealth has accepted responsibility for lights within port boundaries where these lights are necessary for commercial shipping and they have indicated that they would consider on its merits any case for lights which would be helpful to fishermen but which also could be of assistance to commercial shipping.

There is one thing which the Commonwealth has indicated with certainty and that is that they will not accept responsibility for leading lights into fishing boat anchorages. (Trans. p. 1829.)

In carrying out its responsibilities in regard to boat anchorages and anchorages the Department must be armed with a reliable marine survey of such localities. This information is not now available to the Department and in order to obtain it in any particular case the Department is obliged to rely upon the already heavily taxed resources of the Harbours and Rivers Branch of the Public Works Department. It appears that this Branch will have its hands full for some considerable time with major harbour development. The improvement of boat anchorages and anchorages having become a matter of immediate concern to the Harbour and Light Department will require to bring its information up to date. It appears from the evidence referred to in earlier parts of this Report and from inspections carried out that the Department must establish its own hydrographic survey section in order to cope with the work. The problem was dealt with by the Manager, Mr. Forsyth, at the first sittings of the Commission. He made the following comments:—

I might add the Department has been instructed by the Minister to make an investigation in regard to the equipping of recognised anchorages—not every anchorage—with leading lights and leading markers and the Department has two officers now inspecting these places to find out what is required. However, you must recognise that before any navigation authority would put navigation markers in any of these places they would have to have the places surveyed first. So before putting lights in any anchorage, some other authority must
make a hydrographic survey of the approach and entrance to the anchorage. If you put down leading markers and lights because everybody has been using an anchorage a boat might hit a rock on that line and the authority is liable for all the cost. (Trans. p. 26.)

It is recommended therefore that a hydrographic survey section of the Department be established forthwith, suitably equipped with a vessel and technical staff.

In addition to the appointment of a compass adjustor, legal clerk, a naval architect and technical hydrographic survey staff, the Department requires immediate additions to the staff, consisting of:

(1) engineers and ship surveyors—one to be stationed permanently at Geraldton;
(2) inspectors and water police;
(3) patrol boat skippers and crew;
(4) clerical staff at Head Office and outports as required.

The Commission recommends accordingly.

Details of staff, extra accommodation, boats and vehicles required should be the subject of an early report to the appropriate authority by the Manager, Harbour and Light Department, and it is so recommended.

PART 3.

Reference (c): "the requirements and standards of qualifications for masters, mates, engineers, marine motor engine drivers and coxswains' certificates are of sufficiently high standard."

The Commission finds that, with one exception, in the case of coxswains, the qualifications prescribed by the regulations under the Western Australian Marine Act relating to masters, mates, engineers, marine motor engine drivers and coxswains' certificates are of sufficiently high standard.

It has become apparent from the evidence that coxswains generally do not have or have not been required to have a working knowledge of the compass. The majority of witnesses in the category of coxswain do not understand the compass or its uses. It is recommended that the following words be added to subregulation (e) of regulation 37 of the Manning of Fishing Vessels regulations:

He must be able to take a bearing by compass, and to apply variation an deviation to find a true bearing; to use a chart or plan and know the meaning of all the marks signs and abbreviations thereon; and to find the compass course (or courses) and distance (or distances) between two points on the chart.

The degree of strictness to be exercised by examiners has been dealt with.

It is also apparent that the recording of sea-time for crew members has been most haphazard. There is in fact no accurate record kept of the time actually served by a crew member on board a vessel.

It is recommended therefore that a hard covered record of service book be kept by every member of a fishing vessel, including engineers, in a form to be prescribed by the Harbour and Light Department, and that every period of service be entered in the book by the master of the vessel and signed by him, the heaviest penalty prescribed by the regulations to apply to false entries or failure to keep the record.

The training of crew members in seamanship is, in many cases, non-existent and their education equally deficient. It is recommended that any deck crew member on a fishing vessel undertake the Education Department's course in coastal navigation or an equivalent course, and that he produce, on application to the Harbour and Light Department for examination for coxswain, the Education Department's certificate or its equivalent that he has secured the Department's "B" pass in coastal navigation and nautical knowledge. This certificate should be produced with his record of service book. The certificate referred to was mentioned in evidence by Mr. S. C. Turner, Principal Fremantle Technical School, in the following terms:

One point I would make here is that the course we conduct is to prepare students for our own Technical Education Division Examination, for which we issue a certificate. This particular certificate has no commercial value at all, but it does state that students of our course have reached a certain standard. It is not, of course, the official certificate which is issued by the Harbour and Light Department, because there are certain requirements in relation to eyesight, years of sea service as a helmsman and so on, which of course, for the purposes of this certificate we are not interested in. This certificate merely states that this is to certify that at the annual examinations held in November, —, John Citizen secured a pass in the following one subject at the grade indicated; Coastal Navigation and nautical knowledge "B" pass. (Trans. p. 1758.)

It is respectfully suggested that the Director of Education be asked to provide a course for engineers of fishing vessels similar in extent to the coastal navigation course and that elementary radio telephony for fishing vessels be included in both courses.

Although regulation 74 of the Survey and Equipment regulations requires every seagoing fishing vessel to be provided with an approved first aid kit, there does not appear to be any standardisation of the extent of the kit to be carried, nor is there any requirements that anyone on board have a knowledge of elementary first aid. These matters should receive immediate attention
from the Harbour and Light Department. Another matter requiring attention is that no one on board a fishing vessel is obliged to have any knowledge of Morse Code, even to the extent of sending an S.O.S. message.

It is further recommended that any of the foregoing matters made the subject of recommendations be included in appropriate regulations to be framed by the Department if and as soon as the machinery for putting them into effect becomes available.

The witness, Geoffrey Bourne, Lieut.-Commander, R.N., retired, drew the attention of the Commission to what he considered to be an anomaly existing between the qualifications required of skippers and coxswains of fishing vessels, on one hand, and coxswains and masters of harbour and river craft on the other. He considered that an invidious distinction had been made in the case of a workboat skipper who was not allowed to take his boat outside port limits. He stated:

"It can be seen that in general the minimum ages for fishing vessel tickets is one or two years less than the equivalent workboat certificates, although the numbers of years' experience required is similar. Yet the fishing boat skipper may take his boat anywhere up the coast because he has passed a simple theoretical examination."

This gives him complete licence to work his boat wherever he chooses and in any weather he chooses. This is particularly relevant with Coxswains (under "sea" bour and Light Department.)

The workboat skipper on the other hand, even if he passes the theoretical exam may still not take his boat outside the Port limit because he has not had the "sea" experience. He could have 20 years' experience handling small craft in an area that includes Rottnest, Cockburn Sound and waters out to the Bell Buoy, but he cannot take even the smallest boat to "sea". Not until he qualifies for an "under 300 ton" certificate can he officially take even a 10 ton boat up the coast. The only way he can get this is by going to sea in a coaster, deep sea vessel or fishing boat for four years—to gain "experience". One wonders here just what we mean by "experience"? Does a year working in a fishing boat out of Jurien Bay or Cervantes necessarily give one the experience to work anywhere along the coast? Is the sea, when it's nasty, so very different at Ledge Point to that off the Stragglers?

The Commission could not see sufficient grounds for recommending that the existing regulations be disturbed and preferred to leave the matter in the hands of the Harbour and Light Department.

PART 4.

Reference (d) "the adequacy of the present organisation and facilities for the search and rescue of persons missing at sea from such ships and any improvements considered to be desirable;"

The following submissions were written at my request by my Adviser, Mr. R. T. Napier, after consultation with myself and my other Advisers. The submissions are fully supported by the evidence and I concur with them in detail. I further recommend that all of the recommendations contained therein be accepted in toto.

Organisation:

I am of the opinion that the Search and Rescue Organisation has done a fairly efficient job with the facilities at hand; however, without regulations compelling skippers or owners of vessels to do certain things or sufficient enforcement officers to enforce existing regulations, the organisation cannot be one hundred per cent. effective.

The West Australian set-up is an off-shoot of the Rescue Organisation formed in the first instance by the Commonwealth Department of Shipping and Transport for search of missing aircraft in Western Australia through the Department of Civil Aviation in Perth. Various bodies, are represented on the Standing Committee enumerated at folio 199, paragraph (7) of the transcript, and they meet from time to time.

All bodies referred to are at call in emergency.

Aircraft:

From a point of view of improvement, it is of vital importance that a suitable aircraft be available at all times to undertake search over vast areas of ocean.

Western Australia has an extensive coastline and fishing and sporting activities extend over the large majority of it.

The most suitable types of planes are the Dakota and the Neptune.

At present the R.A.A.F. Base at Pearce, W.A., upon whom the first call is made for aircraft in an emergency, has at its disposal one Dakota aircraft and several Vampire aeroplanes. The latter, whilst they have been used in emergency, are really not suitable as they fly too fast for search purposes.

Whilst generally available, the Dakota is not always on hand owing to various other commitments, thus the second avenue of request is the Department of Civil Aviation, Perth. This department has one Commander Aircraft available for use when required, should the R.A.A.F. not be able to assist. Again, by reason of other commitments or maintenance work, the Commander may not always be available and the rescue
organisation is then left to explore private or other air companies for aircraft suitable for the occasion, either to hire or charter.

In this respect assistance is readily available from amateur air patrols such as Nor West Whaling Co., and others who assist from time to time if planes are in the vicinity of disasters.

If it is believed a disaster has occurred within, say, up to 20 miles at sea, there are several twin engine planes available. If, however, it is required to extend the search and rescue to 80 miles or more at sea, as has occurred, then the Dakota or Neptune aircraft is most desirable.

Helicopters would be of little use out at sea by reason of the limited distance they can travel, but useful inshore or along the coast. However, I do not recommend provision of this type of aircraft.

It is quite obvious, despite all the precautions taken by fishing crews, accidents will occur, therefore the Search and Rescue Organisation must be equipped to the best advantage in emergency.

It is strongly recommended that representations be made for the stationing of a second Dakota plane in Western Australia to enable at least two planes to be available from the R.A.A.F. Base at Pearce, one at all times.

It is believed the R.A.A.F. Base at Pearce has been changed from operational to training centre. I submit there must be some use for additional operational craft, even for the training of personnel in their use, and training of observers; the latter is of vital importance in sea searches.

In view of possible objection by the Commonwealth to increasing the strength of operational aircraft in this State, the matter could be taken up at Government level. Surely, in the interests of saving human life, such a facility could be granted for the dual purpose expressed; and to assist a fishing fleet more than twice the size of that in any other State with a coastline of far greater length.

Water Transport and Sea Patrol Boats.

With the growth of the fishing industry in Western Australia and the far distances sailed, even today, for good fishing grounds and the likely expansion in the future, it is quite obvious, in the event of distress to any vessel, water transport is required for ready assistance to search and, if personnel aboard are in danger of losing their lives, to rescue them; on occasions it may also be practicable to perhaps salvage the boat by tow.

Possibly the logical department to be assisted in this respect would be the Police Department by reason of the Search and Rescue Organisation being put into action from that department when small ships are in distress.

Despite this, however, I would recommend that instead of the Police Department being so equipped, the Harbour and Light Department be granted funds to purchase fast, suitable, seagoing boats manned by trained personnel, to be stationed at Geraldton and Fremantle; with at least two trailer borne, smaller, fast patrol boats to enable movement whenever desired, particularly to check the ever increasing amateur or private boat owner.

Small Patrol Motor Boats.

With enormous growth of boat minded owners, we now find thousands of small craft used by amateur fishermen and families for pleasure all along the Western Australian coast.

The smaller type, trailer towed power boat, I suggest, would be of great value in policing regulations promulgated for the safety in the use of boats in the open sea, and indeed even inland waters such as estuaries.

Far too many tragedies and near tragedies occur with these smaller boats, as testified during the Commission, particularly at the more popular holiday resorts.

In the event of the Harbour and Light Department being granted the supply of the boats referred to, they could at any time, subject to availability, be placed at the disposal of the Police Department, by mutual arrangements between both departments, in lieu of the provision of a craft to that department, thus serving the Government through both.

Local Rescue Committees.

It is strongly recommended power be given to form Local Rescue Committees in all fishing resorts, to enable immediate initial inquiries to be made in the event of overdue or missing vessels by—

(a) reference to a record of all boats operating in their area, description, skipper, crew, etc., which should be maintained;

(b) evaluating the situation at sea and planning drift by winds and tides;

(c) investigating the last known position of the vessel concerned;

(d) endeavouring to make contact with the vessel or vessels in the vicinity; and

(e) if not successful, taking necessary action to find the vessel, either locally with rescue boats within the organisation or by requesting help from the Rescue Intelligence Centre at Perth.

It is suggested these committees could be comprised of experienced local fishermen of repute, with knowledge of all
boats operating, of skippers and crews, of the coast and the waters being fished, and in addition, any other reputable citizen recommended. It should include whenever possible (in the smaller areas) the local police officer.

It is suggested an ideal Committee would be about four persons, with deputies appointed to act.

When local resources have been instituted and found inadequate, or the rescue operations required are beyond their limits, the Chairman should be empowered, through the local police, to send a request to the Rescue Intelligence and Co-ordination Centre, Police Headquarters, Perth, for further help; particularly if aircraft are required, as the Commissioner of Police is the only person on whose authority the Commonwealth Services, and other organisations, will act in emergency for searches.

Where a police officer is not stationed in the town, then the Chairman of the Committee, or his Deputy, could be authorised to request assistance. Such committees are already operating at Mandurah and Dongara and meeting with success.

Wireless Telephony and Shore Bases.

All vessels reasonably capable of installing a two-way radio telephony set should be made to do so. This however at present raises a problem insofar as, in my opinion, it has been proved beyond question that there are insufficient shore bases to handle all radio traffic likely to eventuate should the many boats capable of having radios be forced to carry them.

I am of the opinion some of the Fishermen's Associations or Co-operatives should take out limited licenses which would enable, on allocated frequencies, continued contact with boats operating in the areas, both for distress or ordinary business calls in relation to fishing.

Despite evidence to the contrary by fishermen and others, the Postmaster-General's Department advises that shore base limited stations will be licensed if applied for, and no Overseas Telecommunication Station is operating in the vicinity. Even in the latter instance, if sufficient evidence were disclosed, a shore base may even be permitted where O.T.C. operate.

These base stations should be capable of transmitting and receiving messages from any boats operating in the area, particularly to receive position calls and distress messages during periods when vessels are out on the ocean.

It is pointed out that such bodies as the Forest Department, Police Department, Bush Fires Board, taxi services, Cheyne Whaling Station, Metropolitan Transport Trust and various firms all operate wireless bases now; therefore such an important State industry as fishing should be equipped with like facilities, particularly as that calling is a hazardous one and dangerous waters have to be fished, with an ever present possibility of disaster. Radio could be of vital help, excepting only those instances when boats possibly overturn, leaving no time to operate radios. Shore bases could receive schedule positions at least twice a day, which would give searchers a starting point and a chance to help in the event of disaster, distress or overdue reports.

Identification Numbers on Boats.

It is further recommended that all boats carry an identification number, permanently marked on the top-side upper structure of the boat, in the case of fishing vessels, to be of a size from 2 ft. x 4 ins., painted black on yellow background, to assist ready identification from the air when aircraft are requisitioned.

It is likewise recommended that all such boats should carry the licensed number in large numerals, amidship on the side or near the flare of the vessel. The existing numbers could be increased in size. Where the boat is of such small dimensions, or by reason of its structure, identification numbers cannot be marked then legislation should authorise the carriage of a canvas sheet, about 5 ft. square, with the identification numbers displayed thereon in black figures on a yellow background. It is considered more appropriate for the marking to be on the boat wherever possible.

Sailing Plan.

It is also suggested, if possible, that fishing skippers should conform to a sailing plan and leave certain information behind when they go out fishing, with such as the Local Emergency Committee, local police, shore base station or next of kin, so that some knowledge is had of their likely whereabouts in the event of being overdue.

This plan could include a description of the boat, crew, if radio equipped, time of departure and estimated time of arrival, with probable location for day's fishing or any changes of destination which may take place for some reason.

This is particularly necessary with boats in which it is impracticable to install a wireless and should include privately owned boats bent on pleasure trips.

A sailing plan would be of invaluable assistance when boats are overdue and would enable ready assessment as to immediate or other action by way of search or rescue, particularly in relation to a starting point for the search. However, I do feel if more shore bases were allocated and a frequency allotted for fishermen alone, much more use would be made of radio and it would prove invaluable.
Summed up, my recommendations to improve facilities and render the Search and Rescue Organisation more efficient, are:

1. Suitable vessels be made available by the State Government to the Harbour and Light Department, for supervision, enforcement of safety regulations, search and rescue; one large one to be stationed each at Fremantle and Geraldton, smaller ones stationed where required by the department.

2. Another aircraft be made available at R.A.A.F. Base, Pearce, preferably Dakota type.

3. Formation of local Search and Rescue Committees at all fishing anchorages, or where boats operate, to make all preliminary inquiries and searches and with power to request assistance beyond their own resources.

4. Enforcement of radio telephony equipment on all boats reasonably capable of carrying it, and provision for twice daily calls to base of position.

5. Provision of more coastal, shore stations, to enable air traffic between boat and shore base only, for schedule calls of position and other reasons in connection with their fishing operations. All messages to be relayed from base to shore recipients to be subject to a charge rate by the Postmaster-General’s Department.

6. Marking of boat license number in black numerals on yellow background on the upper top structure, wheel-house top or deck of all sea going vessels, of a size approximately 2 ft. x 4 ins., and provision of large side markings of the same number on boats to assist in ready identification from both sea level and the air. Smaller boats, or those on which it is not practicable to mark as suggested, to carry a 5 ft. square marker with numbers in black on yellow background; these markings or flags to be inspected regularly and kept clear and legible.

7. If practicable, provision of a sailing plan of destination and time likely to be absent. This item however, could probably be dispensed with if radio contact was made more available, although this of course would not affect smaller type boats.

It must be remembered that the Search and Rescue Organisation at Rescue Intelligence Centre, Police Headquarters, Perth, is set up for action only when life at sea is in danger. It is not anticipated that any legislation effected should cause this organisation to become a salvage unit for boats which merely break down and are in no danger, or where no lives are in jeopardy.

Such operations should be undertaken by the local Rescue Organisation Owners or Fishermen’s Associations, or by mutual arrangement between themselves.

From the first of the sittings of the Royal Commission at Geraldton on 12th May, 1964, until sittings held in Perth on 18th August, 1964, when Mr. W. A. E. Nielsen, Assistant Director - General (Telecommunication) Postmaster-General’s Department, of Melbourne, gave evidence, considerable doubt and misunderstanding existed concerning the attitude of the Postmaster-General’s Department towards the establishment of privately operated limited coast stations (radio telephony). It is certain that many business firms and fishermen’s co-operatives did not fully realise the possibility of obtaining a license to operate a limited coast station. Now that all doubts and misunderstandings have been cleared up and it has been shown by Mr. Nielsen’s evidence that the policy of his Department is tolerant and reasonable, the time would be opportune to implement the provisions of regulation 99A of the Survey and Equipment Regulations, which relates to the compulsory fitting of radio telephony sets on seagoing fishing vessels, provided that the regulation is amended as recommended by this Commission. Fishing boat owners should be allowed further time to comply to enable suitable sets to be purchased and installed and sufficient coast stations equipped to handle the extra traffic that will eventuate. Considerable care should be exercised in the choice and installation of sets and aerials. Any boat owner contemplating the purchase of a radio telephony set should seek the best advice available from the Postmaster-General’s Department and the Harbour and Light Department. Mr. Nielsen’s evidence is recorded at pages 1871-1894 of the transcript notes.

The part which can be played by the Harbour and Light Department and by local committees in the collation of information relating to individual fishing vessels including relating to individual fishing vessels including their identification and operations was stressed by witnesses from the Department of Civil Aviation. Superintendent of Operations, Donald McDonald stated:

On a number of occasions in recent years the Police Department of Western Australia has requested assistance from my department to conduct air searches for missing and/or distressed fishing boats. The effectiveness of an air search can be directly related to the accuracy
of the information provided regarding a missing vessel. On many occasions the information available regarding a missing vessel, its probable position, etc., has been totally inadequate. The most notable deficiencies in this respect are—

(a) the lack of information available regarding the area in which the vessel intended to operate;

(b) the lapse of time before an air search was requested resulting in a huge increase in the area of possibility; and

(c) the complete lack of identification markings displayed on all vessels resulting in identification from the air being extremely difficult. (Trans. p. 1023.)

Inspector of Air Safety, Mr. K. Pritchard stated:

Actually what I had in mind was that these committees should establish a certain amount of fixed information that would be easily available so that we would not have to rely on someone going to Snag Island, for instance, and saying: “What can you tell us about this boat or that boat, or the conditions here?” and because a certain man who knows this information is out at sea, you cannot get it. If this information were held in record form at different centres up and down the coast so that any one centre could pick out the information required and hand it to the police or our own people it would be an excellent idea. (Trans. p. 1043.)

The Harbour and Light Department will keep an up-to-date record of all fishing vessels, including a photograph, and it is hoped that local committees will supply full information regarding the area of operations of any lost vessel together with atmospheric and ocean conditions prevailing at the time.

A sample sailing plan, or “float plan” as it is called in the U.S.A. is illustrated in Appendix “C”, figure 5. The letter, which accompanied two pads of float plans sent to the Commission on request, stated:

Our “Float Plan” was developed primarily as a public service to please boat operators but its popularity here in the States, particularly among boating safety organisations such as—the Coast Guard Auxiliary and the U.S. Power Squadrons, has made it a very effective advertisement for us. Currently we are dispensing, free of charge, some twenty to twenty-five thousand pads of these forms annually.

The Marine Office of America is an organisation of ocean and inland marine insurance under-writers. (Exhibit 30—Perth). It is recommended that such a form be adapted for local use on a voluntary basis as in the U.S.A. The letter further stated:

While it is a copyrighted form we have no reason to dissuade you from using it in Australia. We would be happy to have you revise it to suit local conditions and use it in any manner you see fit. If in the course of time, a similar form is made available in your country, we will be happy to know that we had some small part in making boating more enjoyable by making it more safe, half-way around the Globe.”

An early witness before the Royal Commission stated quite mistakenly that the Royal Australian Navy did not participate in search and rescue. Mr. R. T. Napier later clarified the position when he stated:

We can call upon any of these departments; the Departments of the Navy, the Army and the Air. As recently as the loss of the “Cathy Jo” we called on the “Diamantina”, which was up in those waters, to assist us, and she was thrown into the search; and that is not the first occasion. (Trans. p. 1062.)

I feel that the need for one fully equipped long range search and rescue aircraft to be on call at all times cannot be stressed too strongly. Lapse of time is one of the most serious difficulties to be overcome in air search. First of all there is the period before the alarm is given, the need to call out an aircraft decided and the call made; then there is the time taken to brief the crews, to get food, to get the aircraft out and to do the navigational planning—usually about one hour; lastly there is the time to become airborne and get to the search area. The total of these periods could well be many hours, during which a man or men are in grave peril. I feel confident that an appeal at Ministerial level to the Royal Australian Air Force and to the Department of Civil Aviation would enable a working arrangement to be arrived at whereby one aircraft would be at call. There has been no lack of cooperation by Departmental officers or lack of speed of movement in the past having regard to the availability of aircraft. With the streamlining of alarm, callout, description and approximate location of missing vessels, the search and rescue organisation would then lack nothing in all-round efficiency.

PART 5.

Reference (c) “the attitude to, and views on the foregoing matters of those affected by such legislation and its enforcement;”

In the following quotations from the transcript notes of evidence I have endeavoured to give a fair cross section of the opinions of witnesses before the Royal Commission on this important item.

Captain C. Hartley, Harbour Master at Geraldton, said:—

I can only say that the ones I have discussed this with have agreed there is some necessity for a tightening of safety regulations and for the supplying of more efficient survival equipment, but there are many who say they cannot afford it and it is expecting too much of the fishermen to have to pay out all
this money for lifesaving equipment or to have to pay out money to have their compasses adjusted annually which costs £5 5s. to £6 6s. The money factor seems to be what most people are complaining about.

Do you think lack of finance has something to do with their not already securing safety equipment?—I would not say that would be entirely the case. I think there is a natural reluctance for anyone to part with his money on something he feels he might never use or ever be called upon to use, but there are many boats in the fishing fleet which carry inflatable life rafts, and they have bought them without any force on the part of the department. Other fishermen are quite willing to go out to sea with one lifejacket and nothing else and say, "it will never happen to me." (Trans. pp. 8-10.)

In evidence Mr. G. Travia, one of my Advisers answered questions thus:—

Regarding paragraph (e) of the terms of reference, if there is to be a tightening up all round and a greater expense involved, what will the fishermen think about that?—The only way would be to buy the equipment required, or get out of the industry. You will find there will be very few who will refuse, and they will be the ones who have not a boat. Anyone with a boat of any size is proud of his craft, and will readily get the little extra that is needed. They will get everything that is required, bar the inflatable raft.

What about the provision of two-way radio?—There are many boats which are not suitable for installing two-way radio. I personally think the line should be drawn at some particular point. (Trans. p. 40.)

Mr. Frank Bombara, skipper Grade 2 and fisherman, said:—

They should be wholeheartedly in agreement with a tightening up of the safety regulations, especially if it is beneficial to them, such as the requirement to carry life rafts and rocket-flares. That would be to their benefit and they should take to it all right. If I were made to provide something on my boat to help in saving my life I would be willing to do it. (Trans. p. 61.)

Mr. F. B. Money, coxswain and fisherman, answered my questions:—

You and other witnesses have mentioned the tightening up of regulations. It is not much good tightening up the regulations unless they are enforced. I refer to coxswains' tickets and the condition of the vessels, overloading, safety devices, and that sort of thing. How would the fishermen take to being inspected at sea? That is the only way, in some of the regulations, it would be possible to find out whether the regulations were being complied with. How would the fishermen take to that—that is, provided they were not stood over; occasional inspections by a patrol boat?—If it was made law they wouldn't be able to complain. It is for their own safety. This is supposed to be a Safety Commission. I do not think they would have any redress whatsoever.

Do you think they would complain?—Who doesn't? That is the thing.

I have been asked to report on the attitude and views on the foregoing matters—including all safety provisions and so forth—of those affected by such legislation and its enforcement. Would the fishermen, as a whole, take kindly to the tightening up, to the inspections, and to ensuring that the tightening up was carried out?—I don't think so.

You say they would object?—There would be a minority." (Trans. pp. 168-9.)

Mr. L. E. Renfrey, fisherman, answered Captain Woodcock's questions:—

What would you consider would be the attitude of fishermen if legislation were brought in that they had to have some means of auxiliary propulsion; in other words, either a sail or a small outboard, or some other means of propulsion?—I don't think any fisherman who has been in the game all his life, and in it to stay in it, would think of going to sea in a boat without two diesel engines or a sail—two engines in it or a sail and an engine.

That is not quite answering my question. I am asking you what you think the attitude of the majority of fishermen would be?—The majority of fishermen who are in the game to stay would appreciate it. (Trans. pp. 389-390.)

Mr. O. Borg, acting General Manager for a fishermen's co-operative, when questioned, stated:—

If there is a tightening up, how do you think the fishermen will accept that, or how do you think they will like it?—I am sure they will probably start by saying "There are too many rules and regulations and one probably needs an accountant to keep up with them." However, they will finish up by helping because the regulations are for the betterment of their lives or the improvement of their conditions. (Trans. p. 961.)

Mr. K. L. Watson of the Amateur Fishermen's Association of W.A. dealt with the question of stricter controls on private boat users:—

How do you think the general small-boat-using public would react to the matters we have been discussing?—Many would welcome it, but many would not, but in view of the fact that it is for the safety of all concerned, the feelings of those who would not welcome it should be disregarded.
The following comments form part of a statement read by Mr. E. J. Annear, skipper grade 1, representing the Rock Lobster—Crayfish Industry Development Association of Australia:—

With the advent of the Royal Commission into boat safety a unique opportunity presents itself to press home what this association believes to be best for those who risk their lives daily in the fishing industry. Without the fish these men bring in our industry is nothing. Members of this association believe that, as leaders in the industry, it is their responsibility to do all that is possible to protect the lives and property of those engaged in the industry.

In the association's opinion an overhaul of safety precautions is long overdue and the importance of this is emphasised. The establishment of a coastal rescue service, in particular, is strongly recommended. (Trans. p. 1265.)

Mr. L. G. Taylor, coxswain, fisherman of Geraldton, made the following summary:—

To sum up, I do not think you will avoid casualties no matter what happens. It boils down to the individual's attitude to the game. I do not think all the restrictions—that is what I call them—on the fishermen will help that much, because everything is there if they want it. I do not like too many restrictions. When you force anybody to do anything it goes against the grain a bit. If the facilities are there and they do not avail themselves of them they have only themselves to blame. (Trans. p. 1448.)

Mr. F. R. Lemmon, General Manager of a Fishermen's Co-operative, answered a question from myself:—

How do you think the fishermen would react to a tightening up of the existing regulations, plus a few additional regulations, particularly where cost is involved?—All fishermen do not like spending money, but saner minds prevail when it becomes apparent that the spending of certain moneys is of benefit to them. We have found with our shareholders over the years that they will complain about spending money, but when it is pointed out to them that it is for their ultimate benefit, they will agree to it. (Trans. p. 1491.)

There is another school of thought which clings tenaciously to the right of the private person to spend his leisure time and that of members of his family as he ordinates. Mr. L. C. Lawrance, Boat and Outboard Motor dealer, is a member of this school. He read a statement prepared by Mr. B. Gaston, President of the Outboard Boating Association of W.A. Mr. Lawrance, who described himself as "a rebel against controls", supported Mr. Gaston's statement with some views of his own. He considered that small pleasure boats were able to boast of "a phenomenal safe record". The following
verbal passage between Mr. Lawrance and myself illustrates the line of cleavage between us:—

By the Commissioner: He refers in the statement you have just read out to safety records of pleasure craft over the past years having proved that further restrictive regulations would do little to improve the existing good record. I am inclined to think that is a false assumption. There have been quite a few fatalities which occurred recently involving the small pleasure boats and the near-misses we have on record in evidence before the Commission are rather frightening. Whole families could have been drowned but for a stroke of mere luck?—I have been very closely associated with this matter all my life involving small boats and that type of thing, when my business was involved. The actual power boat accidents—I am referring to small pleasure boats at this stage, and they would probably number one or two a year over the last few years although I have not the exact figures and you may have—compared with the vast number of boats which are registered, and which is well over 8,000 illustrate a phenomenal safe record. (Trans. p. 1203.)

Unfortunately, the information before the Commission reveals that the record of small pleasure boats is bad and would not permit of becoming worse. Recent mishaps accompanied by loss of life are listed in Appendix "D". Some of the conclusions of Messrs. Gaston and Lawrance, which have not been based on erroneous assumptions, are sound and have found their way into some of the recommendations made in this Report, including the better education of boat users in particular.

One cannot argue against the right of the individual to employ his leisure time as he desires, but I firmly believe that the existing machinery of the Navigable Waters Regulations could be slightly though effectively enlarged to restrain the foolish and the inexperienced from the needless sacrifice of valuable lives in the pursuit of boating pleasures. I am unable to concede the right of any individual gravely to endanger life in a small boat to any greater degree than he would be permitted in a motor vehicle.

The cost factor would be a positively important consideration for professional and amateur boat users alike. To my mind it is, from a practical point of view, equally as trite to say that cost should not matter when life is at stake, as to say that one can do what he likes with his own life. There are limitations. Very few fishermen are heedless mercenaries who get into the industry with the minimum outlay and get out secure for life with a trail of broken laws behind them. Not too many pleasure boat owners who are family men can walk into a marine centre and spend £100 cash on extra safety equipment for the smart little outfits, which have or will cost them the savings of years.

Some of the day to day problems which confront fishermen and their thoughts in matters of cost are illustrated by the following quotations from the evidence:—

I was behind this year, after last year's upset with the boat. I have got out of that and I am a few bob in front. However, I am up against it. I have to take my wife and myself away for a holiday and it is going to cost me to buy a radio and inflatable raft. I will have to go to the Co-op. to see if they will lend me some money. The people who fish do not have much trouble borrowing from the Co-op. for equipment. The Co-op. paid me £100 last year. That got me going all right. As regards finance, they would not have it in their own pocket, but they could get it. (Trans. p. 251.)

The biggest factor against this equipment is the cost. I understand a two-man raft runs into about £120 and the bigger ones to about £200. I have seen similar pamphlets showing the various types of raft available, but I did not have the finance to procure one. (Trans. p. 265.)

If there was a boat adrift equipped with a wireless, and we had a station here, it would probably make it unnecessary to get a plane up. If he gives his position, there is always a boat capable of going and getting him. I am probably talking myself into spending a couple of hundred pounds, but I think it would be money well spent. (Trans. p. 291.)

The next point is the raft. All the members are in favour, but would like it to be of an approved design, and, on account of the high cost of these rafts, would like some form of Government supply at a reasonable cost, if possible. (Trans. pp. 394-5.)

As far as the fishermen are concerned all these extra safety measures are added cost and increase our cost of production. There are many safety measures available for fishermen at the present time but they are all costly to buy. Also the installation of R.T. for boat-to-boat communication is most expensive but possibly it is necessary for the safety of fishing craft. (Trans. p. 538.)

There were some (rafts) done up in canvas and I asked the price and was told they were £100 and more. It seems a fantastic price to pay for something that will get thrown around in the weather. They also said I would have to send it back to them each year for a survey. (Trans. p. 605.)

What would you have given about 30 years ago if there was a raft when you found yourself swimming in the middle of the ocean? What would you have given just to have something to hang
on to—I had a kerosene tin, which saved me. That is why I am here today. (Trans. p. 840.)

But when we talk about automatic life rafts and automatic radios and that sort of thing we are loading the industry to a great degree with another financial burden and despite the popular belief that the industry can well afford to be loaded with these financial burdens, somewhere along the line the Government should investigate these things and, if possible, make them available through Government bulk purchase or something like that. (Trans. p. 1461.)

If radio equipment were cheaper I think one would have no hesitation in installing a radio. The economics of fishing today are not like they used to be; it is a pretty hard game. Fishermen are getting hit right and left with heavy costs and it is getting that way that the costs are greater than the return. If the installation of radios on boats is made compulsory, the Government should subsidise the cost of installation to some extent. (Trans. p. 1660.)

I have a suggestion for the provision of Government funds at a low rate of interest for new gear to deepsea fishermen.

The cost of gear on a £2,000 boat is £431 16s. at present. That is a conservative estimate for the compulsory gear. There is one transceiver which includes aerial and earth and crystals and license which costs £230. That is a set with a 35 watt aerial—a power aerial costing £24 (included). It is remote controlled and is most suitable. There is one four-man inflatable life raft 5 ft. 11 ins. in diameter which costs £130: a first aid kit costing £6; a fire extinguisher costing £15; a barometer costing £12 16s.; a compass and gimbal costing £10; a life buoy costing £6; four life jackets costing £12; distress flags £4; distress flares £2; license and survey fees £7; a compass adjustment £6, making a total of £431 16s. (Trans. p. 1747.)

During the progress of the Royal Commission the attitude and views of owners of vessels and their associates became clear in general outline and may be summarised as follows:—

(1) The loss of life and property is too great.
(2) The existing regulations should be enforced uniformly and rigidly by men who understand the conditions faced at sea.
(3) In some instances extra safety equipment is required; it should be compact, light and easily accessible.
(4) The cost of navigation and safety equipment is a major item.
(5) It is possible to over-regulate for and to over-equip small vessels.
(6) The Department should be strict in the survey of engine and hull and in the manning of a vessel.

(7) The Department should be liberal in the exercise of its discretion where discretionary measures are involved.
(8) Safety does not lie in the number of measures or articles prescribed but in the quality of such, having regard to the circumstances.
(9) Safety begins on the slipways and in the anchorages.
(10) Vast improvement is required in shore facilities.
(11) Boat owners, skippers and crews will accept added safety measures and stricter control if—
   (i) evasion is reduced to a minimum;
   (ii) the value of the equipment or service is evident;
   (iii) The cost is within reach;
   (iv) shore facilities keep pace with developments at sea.

It is not proposed to comment further on this summary. Throughout the Report my views have been expressed and evidence quoted in support. The summary expresses what I consider to be the attitude and views of the great majority of witnesses. There are different points of view as ever and there will be opponents of any steps taken to make vessels safer for use at sea. A failure to appreciate the problems of boat owners or to provide adequate shore facilities could drive them all into one hostile camp.

PART 6.

Reference (f): "generally the safety of such ships and those aboard them while at sea, and recommendations for or in regard to legislation, organisation, control, facilities, education or other matters to provide or improve measures for such safety;".

It has been shown by evidence and mentioned in the foregoing parts of this Report that the coastline of Western Australia possesses vast economic wealth fully exploited, so far as our major resources are known, in respect of crayfish, salmon and snapper only. Prawn fisheries are developing; Spanish mackerel are virtually untouched. Mainland based tuna and sardine fisheries have not yet started. Even now Western Australia contributes approximately 70% of the exports of marine products of Australia, to a total value of nearly £6,000,000 per annum. It would require a detailed survey of the 900 odd fishing vessels and the 8,000 odd registered private motor boats to assess their total value. With these vessels ranging in cost from £200 to over £20,000 without equipment, their total value must run into millions. The annual maintenance figure would be a very large sum.

Speaking of the economic value of the crayfishing industry Dr. Sheard writes:

The Commonwealth benefits through increased overseas exchange and through receipts from taxation. With a primary interest in overseas balances, and not
concerned with internal cost, save as that affects the relatively small taxation returns, the Commonwealth needs are met by an objective of a maximum sustainable yield of good quality, best average weight crayfish tails. The State of Western Australia, which benefits through increased purchasing power, receives in various fields, employment for its citizens, and a higher degree of social and economic stability, would require that the total cost does not exceed the return. The regional centres of Fremantle and Geraldton gain through local revenues, increased local purchasing power, growth and economic stability through local investment. Their interests would best be served by a measure of net economic gain. Individual fishermen, operatives of all kinds, and entrepreneurs benefit from more consistent employment, higher incomes, and better standards of living. (The Western Australian Fisheries, pp. 54-55.)

I propose now to deal with safety factors of a general nature.

Coastal Lighthouses.

The need for better anchorages of adequate depth and suitably lighted has been dealt with in my review of the causes of casualties. Of major importance in the safe coastwise movement of all classes of vessels large and small is the existence of lighthouses. This matter was dealt with in a submission by Captain D. P. Piggford, reported at pp. 1847-1870 of the transcript. In introducing the submission Captain Piggford prefaced it with the following remarks:

I am appearing today on behalf of the Company of Master Mariners of Australia, W.A. Branch, of which I have the honour to be the Deputy Master.

In response to a request from this Royal Commission, our Company has carefully considered the subject of coastal lights and navigational aids in Western Australia.

Our committee found this quite a task, and, our resulting report, is a formidable one. However, we would like to stress that we fully appreciate that all we have advocated could not be done at once and that the work and cost would have to be spread out over a number of years.

If and when this programme has been completed, then in our opinion the Western Australian coast would be considered to be reasonably well lit and provided with aids which, at the moment, it patently is not. (Trans. p. 1847.)

Apart from its significance in the safety of ocean-going vessels subject to the Western Australian Marine Act, the document is of extreme importance in view of the proposed development of the Western Australian coast by the establishment of harbours for deep draft vessels, mainly ore carriers. The port of Geraldton is an outstanding example of harbour development without properly lit ocean approaches. I refer to the North and South Abrolhos and Beagle Island (where the "Altkmos" first grounded). A similar situation arises at Esperance and again at Point Samson, and Port Hedland.

Schedule "F" to the Report of this Commission is a reproduction of a schedule which accompanied Captain Piggford's submission. I commend it for close study and implementation in the manner suggested by Captain Piggford in his opening. I am aware that many of these proposals have received consideration and that some may have been approved, but they now have the additional backing of a Royal Commission charged to inquire into and report upon the safety of certain ships which proceed outside the inland waters of this State and which habitually use the sealanes under consideration.

THE ROLE OF PRIVATE ENTERPRISE.

Between the larger anchorages of Fremantle and Geraldton the work of development has been carried out almost in its entirety by private enterprise, comprising the fishermen, the Co-operatives, private business houses associated with the fishing industry and latterly, the oil companies. The tourist industry has benefited from the opening-up of the coastline. In the wake of the tourists there has come better access by road and better communications generally.

There can be little doubt that the primary object of heavy expenditure on the part of private enterprise is the long range project of utilising capital funds in profitable ventures. However the risk is theirs and the major benefit is the Nation's.

To the fishermen has fallen the task of exploring and pioneering. Where it has been necessary to mark passages, as at the Abrolhos, the fishermen have placed and maintained the markers. With the erection of dwellings at the Abrolhos and at the remote mainland anchorages the provision for water supplies, lighting and sewage disposal has fallen to the fishermen or to the Co-operatives and other traders. The major undertakings such as building jetties, light and power installations, group housing, reticulated water supplies and minor road making have fallen likewise to the Co-operatives and other traders. One private business house estimates its capital expenditure under these headings at £30,000, with radio stations at another £2,200. By comparison, the expenditure of the same trader on processing plants and refrigeration is estimated at £110,000. One Co-operative estimates its capital expenditure on shore installations exclusive of processing plants and refrigeration at £50,000. Another private business house estimates its capital expenditure upon services usually provided by local or central government authorities at £39,200.

THE PUBLIC PURSE.

Throughout the Commission's hearings the Fremantle Boat Harbour has featured as the proud boast of Departmental expenditure on the welfare of the fishing industry. Up to date it has cost in the vicinity of £450,000.
As a fishing boat harbour it is still incomplete and in all probability it will never be an ideal fishing boat harbour on account of its many other uses. A departmental professional officer, who gave evidence, did not consider even 50 per cent of the total cost as a fair allocation to the fishing industry. Other uses of the area comprise the mooring of Government owned floating plant including dredges, the pre-shipment treatment and storage of north-west jetty components, the allocation of part of the reclaimed area for road widening, the same for railway forward planning including standard gauge, and the siting of other storage depots for Government use with road and sea access. Unfortunately the provision of a mooring area for large Government owned floating plant has left the entrance open to the westerly swell. At the time of my inspection there was a strong but less than gale force westerly wind, with a moderate swell, causing a bad surge inside the northern breakwater resulting in excessive heaving and rubbing of berthed fishing vessels.

The following extracts from the May, 1964, issue of the Fisheries Newsletter, published by the Fisheries Branch of the Department of Primary Industry, Canberra, show recent and anticipated Government expenditure on fishing boat harbours in New South Wales. Pictures are reprinted and shown in Appendix "C", figures 6 and 7, to this Report.

N.S.W. Plans Chain of Safe Ports.

A chain of safe fishing ports is being forged on the New South Wales coast by the New South Wales Government.

To date expenditure of more than £1,300,000 has been approved on improvements to seven fishing ports. Port works already have been completed at Bermagui (£160,000), Brunswick Heads (£262,000), Evans Head (£180,000) and Ulladulla (£187,000), work is in progress at Tweed Heads (£390,000 spent to date) and Crowdy Head (expenditure of £49,000 approved) while the building of a breakwater costing £190,000 at Eden has been authorised.

In a number of N.S.W. coastal ports in the past fishing boats have been restricted in their operations by difficult entrance conditions and insufficient depth of water at the bar. In some cases boats have only been able to leave port or return at high tide, and even then some times under dangerous conditions.

Safe Entry.

The N.S.W. Government's plan aims to overcome these difficulties by constructing breakwaters, training walls and other associated harbour works so as to give safe entry at all stages of the tide.

The ultimate aim is to link the whole of the New South Wales coastline with a chain of safe fishing ports in those centres where the industry is actively working.

The scheme also is regarded by the State Government as a step towards decentralisation of industry, by providing facilities for the expansion of the fishing industry and paying the way for the development of processing plants and the creation of local employment.

The wholesale value of the commercial fish catch in New South Wales averages between £3,000,000 and £4,000,000 a year, and the annual catch between 25 and 30 million pounds of fish.

The New South Wales Government also is engaged in an improvement scheme for major ports, such as Newcastle, Port Kembla and Clarence River mouth.

Eden Improvements.

Announcing improvements to the fishing port of Eden the New South Wales Minister for Public Works, Mr. P. N. Ryan, said that the greatly increased safety provided by the breakwater would encourage larger boats to operate from the port to exploit fishing grounds off the coast.

It would allow the fleet of 40 boats to operate on a more efficient basis, he said.

Eden is one of the major New South Wales fishing ports with an annual catch worth more than £500,000. With the development of the tuna fishery based on this port this catch is likely to increase in value.

In the past seas coming from the south-east and east have caused a surge at the jetty to a height up to 6 ft., forcing fishing boats to look for safer moorings in other parts of Twofold Bay. This happens as often as 10 times a year for periods of up to a week.

The new breakwater will provide a high degree of protection both for the fishing fleet and for commercial shipping using the port of Eden.

The following are some of the details given in respect of the ports pictured:

<table>
<thead>
<tr>
<th>Port</th>
<th>Details</th>
<th>Cost to Date</th>
<th>No. of boats served</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ulladulla</td>
<td>Include two new breakwaters—one 1,500 ft. long—the other 720 ft.</td>
<td>£187,000</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evans Head</td>
<td>Include two new breakwaters—one 970 ft. long—the other 620 ft. 100,000 tons of rock used</td>
<td>£180,220</td>
<td>20-30</td>
</tr>
<tr>
<td>Tweed Heads</td>
<td>Picture shows at least four groynes or breakwaters—work still in progress</td>
<td>£300,000</td>
<td>30</td>
</tr>
<tr>
<td>Bermagui</td>
<td>Picture shows two groynes or breakwaters</td>
<td>£160,000</td>
<td>10-15</td>
</tr>
<tr>
<td>Eden</td>
<td>Includes one new breakwater</td>
<td>£190,000</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In view of the contribution by New South Wales of 4.9% to the total exports of marine products for the Commonwealth as compared with Western Australia's 69.9%, the fishing industry of the former State seems to have been remarkably well treated in the matter of expenditure out of the public purse. The vessels served are only a fraction in number of those served by Western Australian anchorages and the illustrations in various copies of "Fisheries Newsletter" do not indicate that they are larger in size.

**ALL WEATHER ANCHORAGES— URGENT NEEDS.**

The claims of certain anchorages along our coastline for conversion to protected and fully equipped boat harbours has been discussed in Chapter IV of this report. Such conversion would, as in the other States, involve the provision of protection from the ocean swell by means of breakwaters or groynes, loading wharfs or jetties, deepening to accommodate large fishing or tourist vessels, similar deepening of channels to anchorages, provision of leading lights and day markers, provision of slipways and mooring pens where practicable. No conversion could be carried out safely without prior survey of the proposed new anchorage and its approaches.

The following order of priority for construction of fishing boat harbours is based on their location and the density of concentration of vessels combined with need for protection:

1. Denison (Dongara).
2. Lancelin.
3. Jurien Bay.

The following order of priority of construction of multi-purpose small boat harbours for use by fishing boats, tourist vessels and yachts is similarly based:

1. Mandurah.
2. Rockingham.

The needs are urgent in all cases. An immediate start should be made with the survey and construction of the all-weather boat harbour at Denison and work should proceed with the other anchorages listed with convenient haste. The Commission recommends accordingly.

Reverting to Fremantle boat harbour, intelligent laymen not entirelyversed in the behaviour of the sea have suggested that an L-shaped spur on the end of the northern breakwater would protect the anchorage from the westerly ocean swell, leaving plenty of room for the passage of the dredge and floating plant. While this idea has undoubtedly received consideration previously, it is again submitted as a possible remedy for a seemingly unnecessary defect in an otherwise fine achievement in small boat harbour construction. Furthermore, it is recommended that the completion of the slipways, jetties and mooring pens already planned for the southern side of the boat harbour be proceeded with to completion.

While I have given pride of place earlier in this report to Geraldton as the best small boat harbour on the coast, it still requires one additional divided slipway capable of slipping one large or two small vessels. In my opinion any other criticism of the Geraldton installations was carping rather than constructive.

**LESSER ANCHORAGES.**

The term "lesser" has been used for want of a better, implying of less importance when compared with the anchorages listed as priorities and which would provide a service for one hundred or more vessels regularly in the busy season. This does not exclude the possibility now present of one of the lesser anchorages, say Denham (Shark Bay), having over 100 vessels using the anchorage in the flush snapper season or at any holiday time. The same could occur within ten years at Point Samson with the growth of the spanish mackerel fishery and big game fishing in the Dampier Archipelago.

It was not possible for the Commission to make a careful inspection by land and sea of all anchorages which have already reached the stage of commercial importance, here listed as lesser anchorages. It is recommended that surveys, both physical and economic, be undertaken promptly at the following places with a view to determining the immediate requirements by way of shore facilities from a safety angle and the expenditure warranted by Australian—not West Australian—standards of improvements from an economic angle:

- Point Samson.
- Carnarvon.
- Shark Bay (Denham, Monkey Mia, South Passage).
- Murchison River (Kalbarri).
- Cliff Head (Freshwater Point, Knobby Head).
- Bagle Islands.
- Snag Island.
- Green Head.
- Green Island.
- Cervantes Island.
- Wedge Island.
- Ledge Point.
- Cape Leschenault.
- Yanchep.
- Safety Bay.
- Busselton (Dunsborough).
- Augusta (Cape Leeuwin).
- Normalup (Denmark).
- Albany.
- Esperance.

This list would require revision if occasion arose, for example, Exmouth Gulf is developing as a major prawn fishery and Onslow is stirring again as a commercial and sporting fishing centre.
The improvements required at these anchorages listed could include any one or more of the following features: single groyne, jetty or loading wharf, leading lights, marker buoys, day beacons, anchorage or channel deepening, slipways or jinker haulage facilities.

During the course of the Commission the mere mention of the provision of some of these facilities, even at major anchorages, has created a tendency to scoff among persons who should have been better informed and who would now do well to reorientate their thinking. Their vision should be focussed upon the wider horizon of world trade. No vessel can be properly surveyed unless it is slipped periodically, nor can it be made safe. So far as I am aware there is no commercial slipway between Fremantle and Geraldton. It may be convenient for the Harbour and Light Department to direct vessels to either Geraldton or Fremantle for dry survey, but it is not a sound economic proposition for fishermen and it could be perilous. The only alternative is slipway or jinker haulage along the coast to which vessels can be directed according to locality and cycle of their operations. Moreover, technical officers of other Departments associated with primary production go out of their way to meet the producers on the producers' own territory. This should not be too much to expect of the Harbour and Light Department's officers.

The status to which the fishing industry has grown in Western Australia can be gauged from local export statistics tabulated hereunder. The gloomy forecasts of a slump in the cray-fishing section of the industry, which have become a hardy annual, have not materialised as yet. Periodical fluctuation in overseas prices is merely a healthy feature which tends to keep a rein upon uneconomic operating.

MAJOR WESTERN AUSTRALIAN EXPORTS.
(Excluding Wool, Grain, Petroleum Products and Gold Bullion.)

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Value of Exports (£'000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year ended 30/6/63</td>
</tr>
<tr>
<td>Marine Products</td>
<td>6,248</td>
</tr>
<tr>
<td>Beef and Veal</td>
<td>4,694</td>
</tr>
<tr>
<td>Timber</td>
<td>3,629</td>
</tr>
<tr>
<td>Skins and Hides</td>
<td>2,463</td>
</tr>
<tr>
<td>Flour</td>
<td>2,320</td>
</tr>
<tr>
<td>Fresh Fruit</td>
<td>2,047</td>
</tr>
<tr>
<td>Iron Ore</td>
<td>1,471</td>
</tr>
<tr>
<td>Mutton and Lamb</td>
<td>1,390</td>
</tr>
<tr>
<td>Sheep</td>
<td>747</td>
</tr>
<tr>
<td>Cattle</td>
<td>53</td>
</tr>
<tr>
<td>Butter</td>
<td>114</td>
</tr>
</tbody>
</table>

(a) Subject to Revision.

Source: Commonwealth Statistician.

INSTRUCTION BOOKLETS.

There is in existence an item of safety equipment, the value of which cannot be gauged because of the intangible nature of its benefits. I refer to leaflets and booklets issued by aquatic sporting bodies, the Press and by some Government Departments from time to time. It is not known—and the information is not available—what benefit a reader derives from reading such a pamphlet or booklet, but it is certain that sometime, somewhere, a reader will gain a little knowledge which will save a life.

Many readers will gain knowledge which may save many lives.

I refer to such publications as the Handbook issued by the West Australian Water Ski Association and the Daily News Boating Handbook, both issued in 1962. The Police Traffic Department's handbook "Over to You" is a worthy forerunner issued for the purpose of road safety. Volume 5 of the Australia Pilot has been mentioned in evidence as an official publication containing valuable information about the Western Australian coast. The Cruising Yacht Clubs issue booklets from time to time particularly on the occasion of an ocean race.

The "Daily News" handbook contains the following foreword, which speaks for itself:

Boats and boating have been a major West Australian pastime since Captain James Stirling and the pioneer settlers first sailed up the Swan River in 1829.

River and sea are our heritage. Today, more than ever before, West Australians are finding pleasure on the water.

Right now there's a spectacular boom in boating. There are new and excitingly-fast boats powered by high-powered engines. The modern sports of water-skiing and under-water diving have combined with traditional yachting and rowing.

The number of craft on the Swan River has increased three-fold in as many years. In the next few years it can be expected to double again.

All this means the end of the old carefree era when you could meander across the water in your boat unhampered by regulations or worries about what anyone else in the world was doing.

There's still room for all—but like our highways, the increase in traffic has meant rules have to be laid down and obeyed on the water.

They are commonsense rules: no burden to the intelligent boating enthusiast. They go with all the other practical rules for boating developed overseas and in W.A. over the years.

This booklet contains all the official rules and regulations you will need to know for boating in Western Australia, as well as lots of practical hints.
It is a commonsense booklet filed with information to help the West Australian boating man. Whether you are a barnacled expert or a first-time sailor—a few minutes' study of the following pages will help you before you cast off.

All that is here has been compiled for your safety.

The Harbour and Light Department has a handbook in an advanced stage of preparation, which could be developed along the same lines as the "Daily News" publication, but devoted more to the use of ocean-going vessels and containing detailed information about movement coastwise and coastal anchorages. Such a handbook, if completed, could be issued to all licensees of vessels and to persons holding certificates as skippers or coxswains, as well as to owners of registered pleasure boats. All this is holding up the completion and publication of this booklet is lack of staff.

Aquatic sporting bodies, which have proceeded to the publication of their own safety booklet, and the Press are to be commended for their enterprise. It is recommended that work on the Harbour and Light Department's handbook be enabled to proceed forthwith and that the required staff be made available for the purpose. This will enable the Department to pursue one of its functions of being an education medium as well as a policing authority.

VOLUNTARY ENFORCEMENT.

Many of the Yacht Clubs and other aquatic sporting bodies are so well organised and their members so well disciplined, that it would be a simple matter for the Clubs or Associations to take over the voluntary enforcement of the Navigable Waters Regulations and any other regulations which may be extended to private vessels. It is not suggested that any such body should be obliged to take part in the prosecution of one of its own members, but merely that senior club officials be armed with the necessary statutory powers. The same principle could be extended to local rescue committees and to officers of local governing bodies where they are agreeable to accept the responsibility.

It is recommended that the Department be given power to issue the necessary authorities where it does not already possess such power. Something similar to regulation 30 of the Survey and Equipment Regulations would seem to be required.

It is considered inadvisable that the Department should delegate any of its authority in respect of members of the general public to private persons not accredited by well established yacht clubs, sporting bodies, local rescue organisation, or shire councils. It is feared that such unaccredited persons would tend to be guided by zeal rather than by common sense. Any officiousness or encroachment upon liberty not authorised by Parliament would be fatal to the acceptance of additional safety requirements by members of the public subject thereto.

PASSENGER VESSELS.

The attention of the Commission was drawn to the safety requirements concerning passenger vessels, which proceed outside the inner harbour at Fremantle but remain within the confines of Cockburn Sound and Garden Roads, by a witness H. S. S. Neilson, retired civil servant of South Perth. The following extracts from his evidence contain the essence of his submissions:

As a layman I wish to state my views on present safety measures in force for passengers travelling by sea to Rottnest and Garden Islands, and the need for revision of such safety measures.

The regulations regarding lifeboats for ships leaving Fremantle are very strict. They must be in good order and of sufficient number to accommodate all the passengers and crew in an emergency.

Yet it is possible to see boats like the "Islander" laden with passengers leaving Fremantle harbour to cross an open stretch of ocean with no such safety measures. Beyond carrying buoyancy equipment which for the most part consists of seat forms with drums underneath that would float in the water, there is nothing carried in the way of lifeboat protection for passengers in an emergency.

Ordinary lifeboats would be impracticable to carry but inflatable life rafts could easily be carried that would give a measure of safety to passengers that is totally lacking at present.

In "The West Australian" on Saturday 4th instant (July) there appeared an account of a vessel with a steel hull striking a submerged object in the Parmelia Channel.

In the incident quoted the boat was finally able to clear itself from the submerged object it struck. I have the extract from "The West Australian" with me. The position is that if that object had been struck by a wooden hulled boat like the "Zephyr", the bottom could easily have been ripped out. What would have been the position if that had happened with no radio to communicate with the shore and no lifeboats? All they would have had if that boat had gone under, would have been the seat forms with the drums underneath. Regarding cray boats and fishing boats a few lives are involved and they are all men. On these wooden hulled boats you could have hundreds of passengers, not only men but women and children as well. There is nothing more than those seat forms with drums underneath; there is nothing in the way of lifeboats. Numerous things could happen outside Fremantle Harbour. (Trans. pp. 1054-55.)

At my request Mr. A. F. McKimmie, Engineer Surveyor, of the Harbour and Light Department, submitted an outline of the pre-
cautions taken by the Department in respect of both annual surveys and trip inspections of such vessels. The evidence follows:

Outline of method of inspection and control of passenger vessels proceeding outside Fremantle moles but within the limits of Port of Fremantle:

(1) A file of each individual vessel is maintained which contains a complete history of the vessel since it came under the jurisdiction of the Harbour and Light Department. This records the result of each inspection, any defects found and all repairs carried out.

(2) Hull is inspected internally and externally cleaned off and dry on a slip annually, in the case of a steel hull by an engineer surveyor or in the case of a wooden hull by a shipwright surveyor. At this inspection sea valves and all under water fittings are inspected, tailshafts are drawn for examination and wear every two years.

(3) Boilers are examined internally and externally with all mountings each year and afterwards under steam when safety valves are seen to relieve at the designed pressure when checked against a "Standard Pressure Gauge". What is considered to be a reasonable amount of machinery is examined each year when opened up and afterwards under working conditions. At this inspection bilge and fire pumps are seen working.

(4) Annual inspection is made of each item of lifesaving equipment and ships' equipment. This includes navigation lights, distress signals, fire fighting equipment, anchors and cables.

(5) The number of persons on board is checked on each voyage at Perth and Fremantle and at Rottnest when considered necessary by a Swan River Inspector. The number of passengers is reduced according to the amount of cargo carried. No dangerous cargoes are permitted when carrying passengers.

(6) The number of passengers is arrived at by—
   (i) dividing by four the clear space available for their accommodation on the main deck measured in square feet and by six on upper decks or below main deck areas when the vessel is operating inside Fremantle moles. When operating outside the moles the areas are divided by six and nine respectively;
   (ii) the number for which seating accommodation is provided is arrived at by dividing by 1.5 the total length in feet of the seating;
   (iii) the maximum number of persons allowed is the least arrived at by applying each of the above provisions;
   (iv) the maximum number of persons shall not be allowed unless the surveyor be satisfied that the seaworthiness and stability are such that the vessel can safely carry such number of persons.

Life-saving equipment is as laid down by regulation for Class III ships page 40 of Regulations.

Legislation has recently been approved that these vessels be fitted with radio-telephone. (Trans. p. 1832.)

Mr. Neilson's comments are simple, but factual. What would happen if a fully laden passenger vessel overturned or sank quickly halfway between the North Mole and Rottnest Island in a fierce south-westerly could be left only to the imagination. I fear that the loss of life would be great. What can be done about it is no easy matter to determine.

Under favourable conditions and with a sufficient number of strong swimmers on board to take care of the feeble and the helpless in the water; to help them to the buoyant material and to hold them there until relief arrived, loss of life could be kept down to a minimum. Where all of these favourable conditions did not exist the loss of life would be increased accordingly. Some consolation may be found in the fact that no such disaster has yet overtaken one of the ocean-going passenger ferries, but it is a possibility which cannot be ruled out.

Mr. Neilson has suggested the carrying of inflatable life rafts. This suggestion has my support. Although a costly item they would be a most practical addition to the equipment already carried. I am aware that the Harbour and Light Department has given this subject considerable thought and attention and I do not propose to recommend specific measures for improvement. The provision that the vessels be fitted with radio-telephone is a forward step. I consider that the Department should reassess the whole matter of oceangoing passenger ferries in the light of modern practice in the other States and abroad. Furthermore, I consider that the Department should investigate the possibility of compelling these vessels to carry sufficient of the large self-inflating life rafts to float all of the feeble
and helpless passengers likely to be on board at any one time, with a substantial safety margin. It would be a wrong attitude to say that the matter has been examined over and over and that nothing can be done. Expense must not be the deciding factor. I recommend in accordance with the foregoing conclusions.

QUALITY AND AVAILABILITY OF SAFETY EQUIPMENT.

Members of the Commission were most favourably impressed by the quality and range of safety equipment demonstrated by the suppliers at tests carried out afloat on Melville Water and from the air and afloat in Gage Roads, during the progress of and as part of the Commission's investigations. This does not mean that any intending purchaser should open his wallet and buy anything that resembles the article he is seeking. There is no need for this. There are sufficient items of equipment available to enable him to choose each article of a kind that will measure up to the requirements of the Harbour and Light Department. Undoubtedly there are available sub-standard articles which are so well finished and packaged as to deceive the unwary boat owner. Competition between the suppliers is so keen and local manufacturers so eager to compete that quality should be high while prices find a reasonable low level. I feel confident that suppliers and manufacturers will maintain stocks of various types of equipment if the demand materializes.

If boatowners are obliged by regulation to invest in safety equipment it follows that the Harbour and Light Department should be empowered to stamp unsold articles as being up to Australian standard requirements. Such a stamp would be the purchaser's guarantee of suitability and quality. I recommend accordingly. Misuse or imitation of the Department's stamp should carry a heavy penalty and I so recommend.

TAXATION—THE FISHING INDUSTRY.

This is an item not included in the subject matter of the Royal Commission but it has been raised by witnesses in association with costs in the fishing industry and of safety equipment in particular. Set out in Appendix "G" to this Report is a letter received from the Deputy Commissioner of Taxation in answer to an inquiry from myself. The information which relates to Taxation concessions is included for the benefit of fishermen and others associated with the industry.

CHARTER BOATS.

This is another item not included in the subject matter of the Royal Commission, but raised by witnesses in association with the qualifications of skippers. Grade 2 skipper and fisherman W. A. Miller, of Point Samson, stated:

I think there should be some move made in regard to charter boat operations. From time to time in this area we get various men representing, say, the iron ore companies who want to charter a boat to do various jobs, but we find we have not the proper credentials to carry out a charter.

* * *

However, I think that fishing boats should be permitted to do a lot of charter work in this area because it assists us in the off-season and I think our existing credentials are good enough to do these charters, particularly in these waters up here. Here we know them better than anywhere and I have found skippers up here with higher credentials than us but they have had to come to us for knowledge of the area anyway.

By the Commissioner: What is involved in a charter? Can you give me an example?—Someone wants to go to some part of the coast and it is just a matter of chartering personnel and equipment to a specific area and then bringing them back again.

* * *

I would never be able to get a Grade 1 master's certificate, not for coastal trade, even if I studied hard and became a full bottle on navigation and the whole works, because I have not served time on a trading vessel. You have to serve four or five years on a coastal trader whether you have a master's ticket or not. I did want to do charter work but I have to be on a State ship for five years. Time on a fishing vessel does not count. You might have been a skipper on a fishing boat for 20 years and know as much about the game as anyone but you are not allowed to do charter work. There should be an amendment to the legislation. (Trans. pp. 1674-76.)

It is likely that to permit fishing vessels to engage in charter work would raise the ire of owners of vessels, which are available for such work although not located in remote areas. I do not regard this possibility as a fatal objection to dealing with particular cases on their merits. In my opinion cases would undoubtedly arise where the Department would be justified in granting a special permit to meet the occasion. Section 192 of the Western Australian Marine Act appears to contemplate the granting of such permits, although it is doubtful whether the section overcomes the difficulty about the master of such a vessel. In order to meet the development needs of our long and sparsely populated coastline I recommend that the Harbour and Light Department be given whatever additional authority is necessary to grant permits for vessels and their skippers for the time being to engage in charter work in particular cases having regard to all of the circumstances, provided that no such permit be granted to a person not holding a grade 2 certificate or better.
EDUCATION IN NAVIGATION AND NAUTICAL KNOWLEDGE.

Reference has been made earlier in this Report to the Education Department's courses in coastal Navigation and Nautical Knowledge which were introduced at the Fremantle Technical School in February, 1962. The introduction of the courses met with immediate success and day classes were later extended to evening classes and a correspondence course. For professional fishermen the classes have been extended to embrace navigation and seamanship for candidates for certificate of competency as Skipper, Grade 2, of a fishing vessel. The coastal navigation course has continued to prove popular with yachtsmen and boat owners.

Now that this venture has emerged from the pilot stage and has proved its value under actual working conditions, it is the opinion of this Commission that it should be availed of freely by professional fishermen, yachtsmen and boat owners generally. The Technical Education Division of the Department issues its own non-commercial certificate to candidates who have passed in Coastal Navigation and Nautical Knowledge. Any yachtsman or boat owner should be proud to possess one of these certificates. The course is professional in conception and design. It is under the guidance of a master mariner, foreign going, and amateur skippers are indeed fortunate to have it at their disposal.

I take the liberty of recommending that these courses be given wider publicity among professional fishermen, yachtsmen, at marine centres and among boat owners, and that the Education Department continue to make sufficient day, evening and correspondence classes available.

METEOROLOGY.

The general weather pattern, monthly, according to Dr. Sheard has been quoted. His further written submissions are of interest:

The Weather Bureau has instituted a system of broadcasting regional reports for the use of fishermen and small craft operators. These forecasts are of considerable value. One factor not yet considered in giving these warning services is that of swell prediction where the swell is determined by distant storms (that due to local storms is well covered). Distant storms, however, can result in local swell of considerable magnitude, long distances from the storm area. (For example swells due to storms off New Zealand are readily measurable and identifiable off the coast of California). It could be expected that storms in the General (and Western Indian Ocean) could result in excess swell on the Western Australian Continental shelf. Possibly new weather satellites could provide information, which, together with that obtained from more orthodox services, could be used to provide a more useful service in predicting swell of distant origin.

Fishermen become quite expert at predicting local weather on a short term basis. They have difficulty in interpreting effects of originating at some distant point.

PART 7.

Reference (g): “and, further, the insurance of such ships and recommendations for measures to provide a better coverage for those ships against all or major risks.”

The evidence given by fishermen and representatives of their associations at various ports and anchorages may be summarised under the following headings:

(1) Rates charged by insurers are unduly high.
(2) That the high rates are due in some measure to the high loss ratio in the fishing industry.
(3) That if adequate consideration had been given in the first instance by the insurers to the age, condition and proposed value of the vessels insured and to the records and qualifications of the skippers many of the losses would not have been incurred.
(4) That the experienced and careful owner is being penalised for the errors of the less experienced and less careful owner.
(5) That a system of no claim rebates would do much to alleviate the hardship referred to in 4 above.
(6) That if as the result of the findings of this Commission a boat owner is obliged to become involved in further heavy expenditure for safety purposes he is entitled to expect a proportionate reduction in insurance rates.
(7) That there is considerable and confusing variation between insurers in the matter of risks covered.
(8) That one insurer should handle the whole of the business of the fishing industry with a view to reduction of rates as a consideration.

The answers given by brokers in reply to these submissions are again summarised and given the same numbering, as follow:

(1) The present fishing boat rates are due to:
   (a) the increase in claims incidents,
   (b) the high loss ratio of claims against premiums,
   (c) the increase in claims costs due to—
      (i) increase in cost of repairs,
(ii) higher salvage expenses,
(iii) unreasonable salvage claims being made when only a nominal towing is involved.

(2) Agreed, see 1.

(3) Insurers have restrictions on age of vessels proposed for insurance normally an age limit of 15 years. Insurers rely upon the survey certification of the Harbour and Light Department as to the seaworthiness of the vessel and the qualifications of the person in charge of the craft. Brokers endeavour to check other proposal form information and the moral risk.

(4) The owner of a boat which is subject to continuous small or medium accidents pays a higher premium than the owner of a boat who does not have those accidents. It has been known that the fishermen who consistently have claims find it extremely difficult to get any insurance at all.

(5) There is no system of a no-claim bonus in marine insurance except with private launches. These latter vessels are carefully inspected for seaworthiness and the moral risk considered. The insurers are protected against lack of due diligence. The precautions result in a lower loss ratio and lower premiums.

(6) If, for example, a boat owner requested a special rate for his boat which had positive buoyancy because of the installation of some reputable buoyancy material the underwriters would quote a much lower rate. Similarly, for steel ships with diesel engines there is a definite reduction in the rate charged for a wooden ship with a petrol engine.

(7) There are standard types of cover and the insurers do not depart from any one or combination of them. The type of cover on any particular vessel is purely a matter of selection by the owner.

(8) Whether the handling of the whole of the business of the fishing industry would lead to a reduction in rates is problematical as the principle of no competition and selection among various insurers would be lost.

The evidence of fishermen disclosed many sad cases of loss of property and life where there was no insurance coverage, or where the insurers had repudiated claims even where the vessel was known to be seaworthy. It is usual for a marine policy to include a condition that the vessel insured must at all times be covered by a current certificate of seaworthiness. It is not possible in every case for surveys to be carried out on or prior to the due date. There are many circumstances which operate to defeat the best of intentions such as the non-availability of surveyors, illness, engine breakdown and the like. The survey of some 900 vessels spread out over the coastline between Esperance and Wyndham must necessarily be staggered.

A suggestion by one of the insurers that consideration could be given to the owners of vessels forming what is known as a Mutual Club which in essence, issued its own policies with suitable re-insurance arrangements for major catastrophes and total losses, is worthy of attention by fishermen's associations and the co-operatives. At least one fishermen's representative mentioned such a move in evidence and I commend the idea for further consideration.

During discussions and on inspections it became apparent that there could be many persons engaged in the fishing industry who were "workers" within the meaning of the Workers' Compensation Act, but who were not regarded as such. I consider that it would be advisable for fishermen's associations to draw up a list of the various ways in which personnel are engaged and recommend that consideration could be given to the owners of vessels forming what is known as a Mutual Club which in essence, issued its own policies with suitable re-insurance arrangements for major catastrophes and total losses, is worthy of attention by fishermen's associations and the co-operatives. At least one fishermen's representative mentioned such a move in evidence and I commend the idea for further consideration.

Mr. R. T. Napier, my Adviser, made the following submissions with which I concur:

The matter of insurance in the first instance appears to me one for the individual who may or may not care to take out a personal accident or loss of life cover.

It was evident throughout the hearing by the Commission that the expert professional fisherman with many years experience rarely was concerned in an accident.

However, with the growth of the fishing industry in latter years and less experienced men fishing, accidents and loss of life and vessels has become a problem. Many wives of deceased fishermen, skipper and crew are left penniless by reason of lack of forethought or deliberate avoidance of expending money on insurance.

Whilst workers compensation could cover some fishermen, I venture to say that the majority have no claim under this Act by reason of the method of working, i.e. on a share basis of the profits.
Insurance companies cannot, I feel, be blamed for the premiums applying as losses have been very heavy over the past years.

Finally, I consider that some form of compulsory insurance should apply to all persons engaged in fishing either as owners or crew in relation to personal accidents or loss of life.

Some fishing co-operatives or organisations are at present loath to force owners or crews to insure against accident or loss of life by reason of refusal to work for that particular association, thus losing work hands. Therefore, a compulsory system seems the only solution.

No doubt skippers could pay the premium required and deduct from salaries or commissions due.

The matter of boat insurance I consider is one only the individual can decide.

Until more care is taken by skippers of boats to avoid accident to boats and whilst claims are so many, I cannot see insurance companies reducing premiums to a degree where business is not profitable; thus I feel little can be done in this respect as I do not favour compulsory system to insure boats.

To these submissions I add a recommendation that legislation be introduced to prevent a marine insurance claim from being defeated merely on account of the non-existence of a current certificate of seaworthiness where it can be shown—

(1) that the vessel was in a seaworthy condition immediately before the casualty occurred;

(2) that the non-existence of a current certificate of seaworthiness was not due to any lack of diligence on the part of the owner or person in charge;

(3) that the insurer has not been prejudiced by the omission.

It is also recommended that insurers give further consideration to a no-claim bonus scheme for commercial fishing vessels. I feel sure that such a scheme would promote greater attention to safe handling of vessels during fishing operations.

The Secretary of the Rock Lobster/Crayfish Industry Development Association of Australia, which first raised the matter of the extension of the terms of reference to include insurance, answered my request for comprehensive proposals in the following manner:

I have now to advise that your request has received the close attention of our members but it is regretted that, because of the complex nature of the risks and the highly technical factors involved, the Association is unable to put forward any comprehensive proposals. However, after lengthy discussions at a recent full representative meeting of members of the Association, it was agreed that the Royal Commission be informed that the Association favoured compulsory insurance for crews and that, although it could not put forward a scheme of insurance, it recommended that the Commission give consideration to establishing special legislation to cover loss of life and specified serious disability arising from injury in the fishing industry. In this connection the Association believes that satisfactory cover could not be given under the Workers' Compensation legislation.

(Letter 12/10/94—Exhibit 59—Perth.)

The Association dealt with the matter of insurance of vessels in its original submissions reported on pages 1238-1239 of the transcript notes. The evidence has been included in the summary discussed at the beginning of this Part of the Report. I have nothing further to add to Mr. Napier's comments on the matter of compulsory insurance for crews beyond stating that in my opinion such a scheme has considerable merit.

CHAPTER VI.—CONCLUSION.

It would not be proper to conclude this Report without paying a tribute to the career fishermen who, assisted by private enterprise and their own co-operatives, have built up an export industry to such an extent as greatly to exceed all other Australian states combined and, within this State, to rival all other exports of foodstuffs, grain alone excepted. Crayfish export is second largest in the world—a close second to South Africa. (Sheard p. 39.)

Quotations in the Report from the transcript notes of evidence should convincingly illustrate the courage of the full-time professional fishermen in carrying out their daily occupation on the treacherous reef country which is the habitat of the crayfish, day-in day-out from November to August. It takes a gale-force wind to stop them venturing out, or a heavily breaking sea, or both. This is not stupidity on their part. There are boats and gear to be paid for, loans to be repaid, families to be maintained, children to be educated. There is no 40-hour week, no sick leave, no holidays. New gear and leisure time can be assured only by money in the bank or a good credit rating with the Co-op or private trader. Their's is a kind of courage which has distinguished the native born and the naturalised Australian citizen in other fields. The career fisherman is an individualist ready to learn and to calculate with care the risks he knows he must take.
The degree and quality of comradeship shown between fishermen in rescue work has the same high rating as their courage. There exists an ever-present readiness to risk boats and lives in search and rescue—gale-force winds and heavily breaking seas notwithstanding.

There is no discernible difference between the fisherman and the cruising yachtsman on this coast. It takes the same degree of courage and perhaps a higher degree of seamanship to drive a lightly built racing hull, carrying sail to maximum capacity, day and night against a south-westerly of moderate gale force.

The most that legislation can do is to prescribe minimum safety requirements, the degree of seaworthiness and seamanship required of ships and men respectively and the minimum standards of quality. It is the task of the Department concerned to administer and to enforce the legislation. To those ends it must be properly staffed and equipped. To complete the picture, anchorages and their approaches must be well lighted and of sufficient size and depth to accommodate homing vessels. Shore facilities must be adequate to provide for surveys, maintenance and for any ordinary emergency.

The rest is up to the ship and those on board. Seamanship and sea sense to know how to handle a risk calculated or unforeseen are the final requirements which will ensure maximum safety. This still falls short of absolute safety which the sea does not recognise.

There were some matters raised before the Royal Commission, related to the terms of reference but not, in my opinion, within their scope. These matters included a proposal for the creation of a Maritime Services Board to control all matters maritime; the shortening of the crayfish season south of latitude 30 South in order to avoid the worst of the winter; the improvement of telephone communications; as well as a number of others of equal importance. The evidence was received and recorded, but not followed up. The matters referred to are not dealt with in the Report.

Finally, I wish to thank sincerely all of the witnesses who devoted their time and the benefit of their knowledge to assisting the Royal Commission to arrive at the foregoing findings. In particular I wish to thank those witnesses who must have spent many hours in preparing written submissions which, in themselves, represented painstaking research and report upon the subject matter dealt with. I am deeply indebted to the traders who arranged demonstrations, while being content to remain anonymous as all of them were. Special thanks are due to the Department of Civil Aviation and the Fremantle Harbour Trust for arranging a joint demonstration of air-sea rescue work with the Department's Commander aircraft and the sea-going launch "Challenger" belonging to the Trust. The combined operation demonstrated the effectiveness of a selection of safety equipment, old and new, now made the subject of recommendations herein. I know that all of those persons who have assisted the Commission will derive much satisfaction if this Report achieves any of its objectives to a substantial degree.

Dated at Perth this 9th day of November, 1964.

Your obedient servant,

W. J. WALLWORK,
Royal Commissioner.
APPENDIX "A"

Sworn evidence was adduced from the following witnesses who are shown in their order of appearance before the Royal Commission. The pages of the transcript at which the evidence of each witness is found, appears opposite the name of the witness.

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<tr>
<td>42. Kralzrhub, Siggeun</td>
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<td>48. Weston, Albert E.</td>
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<td>57. Swarbrick, Norman K.</td>
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<td>58. Millidge, Captain Thomas H.</td>
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## APPENDIX "A"—continued

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<td>Burnsle, Robert B.</td>
<td>Farmer and School Bus Driver</td>
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### Fremantle

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### Perth

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### Abrolhos (Pelest Group)

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### Geraldton (2nd Sitting)

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**APPENDIX " A"—continued**

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### APPENDIX "B"

**LIST OF EXHIBITS**

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<tr>
<td>189</td>
<td>Dongara</td>
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<td>Police Circular Orders and General Instructions.</td>
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<tr>
<td>204</td>
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<td>Aerial Photographs 1A to 8A.</td>
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<td>373</td>
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<td>Sketches showing sailing areas.</td>
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<td>Two aerial photographs showing respectively the Channel closed and the Channel open.</td>
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<td>Boat Building Pamphlet.</td>
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<td>Fremantle</td>
<td>8</td>
<td>The Marine Act.</td>
</tr>
<tr>
<td>1768</td>
<td>do.</td>
<td>9</td>
<td>Elementary Seamanship and Nautical Knowledge.</td>
</tr>
<tr>
<td>1768</td>
<td>do.</td>
<td>10</td>
<td>Syllabus.</td>
</tr>
<tr>
<td>1768</td>
<td>do.</td>
<td>11</td>
<td>Tide Tables.</td>
</tr>
<tr>
<td>1768</td>
<td>do.</td>
<td>12</td>
<td>Deviation Card.</td>
</tr>
<tr>
<td>1768</td>
<td>do.</td>
<td>13</td>
<td>Lecture notes suitable to students.</td>
</tr>
<tr>
<td>1768</td>
<td>do.</td>
<td>14</td>
<td>Extract from Harbour Trust Act relating to various signals.</td>
</tr>
<tr>
<td>1768</td>
<td>do.</td>
<td>15</td>
<td>A type of chart prepared with the help of Technical Expansion Service.</td>
</tr>
<tr>
<td>1768</td>
<td>do.</td>
<td>16</td>
<td>Copy of annual examination in coastal navigation and nautical knowledge.</td>
</tr>
<tr>
<td>1875</td>
<td>Perth</td>
<td>16</td>
<td>Brochure R.B. 30 setting out conditions governing licensing and operation of voluntarily fitted ship stations of volunteers.</td>
</tr>
<tr>
<td>1875</td>
<td>do.</td>
<td>16</td>
<td>Sketch map showing the location of the limited coast stations operated for the fishing industry and also coast stations of the O.T.C. communications.</td>
</tr>
<tr>
<td>1877</td>
<td>do.</td>
<td>17</td>
<td>Brochure R.B. 30 setting out the conditions of licensing and operation of ships stations restricted to inter-communications between vessels.</td>
</tr>
<tr>
<td>1877</td>
<td>Perth</td>
<td>18</td>
<td>Brochure R.B. 30 relating to the licensing and operation of limited coast stations and associated ship stations.</td>
</tr>
<tr>
<td>1879</td>
<td>do.</td>
<td>19, 20, 21</td>
<td>Copies of guide cards for operations of small vessels licensed to work O.T.C. Coast Stations.</td>
</tr>
<tr>
<td>1879</td>
<td>do.</td>
<td>22</td>
<td>Handbook for guidance of operators of Stations.</td>
</tr>
<tr>
<td>1899</td>
<td>do.</td>
<td>23</td>
<td>Table of fish and crayfish production excluding white crayfish.</td>
</tr>
<tr>
<td>1902</td>
<td>do.</td>
<td>21</td>
<td>Chart No. 1038, Champion Bay to Cape Naturaliste, including Swan River.</td>
</tr>
<tr>
<td>1902</td>
<td>do.</td>
<td>25</td>
<td>Chart No. 1056, Cape Carver to Champion Bay.</td>
</tr>
<tr>
<td>1970</td>
<td>do.</td>
<td>26</td>
<td>Scale of charges adjustment of compasses for all U.K. Ports.</td>
</tr>
<tr>
<td>1972</td>
<td>do.</td>
<td>28</td>
<td>Plan of condenser unit.</td>
</tr>
<tr>
<td>1980</td>
<td>Geraldton</td>
<td>2</td>
<td>Petition from Port Gregory fishermen concerning the closing of the crayfish season.</td>
</tr>
<tr>
<td>2122</td>
<td>Perth</td>
<td>29</td>
<td>Equipment for demonstration, Friday, 27th August.</td>
</tr>
<tr>
<td>2124</td>
<td>do.</td>
<td>30</td>
<td>Correspondence and sample of &quot;Floats Plan&quot; from America.</td>
</tr>
<tr>
<td>2124</td>
<td>do.</td>
<td>31</td>
<td>&quot;The Western Australian Crayfishery, 1944-1964&quot; by Dr. Keith Sheard.</td>
</tr>
<tr>
<td>2124</td>
<td>do.</td>
<td>32</td>
<td>Correspondence and copy of proceedings at Dongara public meeting regarding loss of &quot;Calydo.&quot;</td>
</tr>
<tr>
<td>2124</td>
<td>do.</td>
<td>33</td>
<td>Correspondence regarding size of boats, written by E. M. Wilson and forwarded by Editor, West Australian.</td>
</tr>
<tr>
<td>2124</td>
<td>do.</td>
<td>34</td>
<td>Correspondence from Minister for Works regarding a submission by Mr. A. J. Gibson.</td>
</tr>
<tr>
<td>2124</td>
<td>do.</td>
<td>35</td>
<td>A letter handed in by Mr. Forsyth from S. Nielsen, South Perth.</td>
</tr>
<tr>
<td>2124</td>
<td>do.</td>
<td>36</td>
<td>Correspondence and advertising sent in by P. M. Products.</td>
</tr>
<tr>
<td>2124</td>
<td>do.</td>
<td>37</td>
<td>Report on fishing boat casualties by W. G. Davies and letter of authority from Mrs. S. Davies to use the report.</td>
</tr>
<tr>
<td>2124</td>
<td>do.</td>
<td>38</td>
<td>Letter from Cridland, Bauer and Rorrison, Solicitors, Darwin, with submissions from Mr. Michele Lombardo of the vessels &quot;Nelma&quot; and &quot;Carmera.&quot;</td>
</tr>
</tbody>
</table>
### APPENDIX "B"—continued

**LIST OF EXHIBITS—continued**

<table>
<thead>
<tr>
<th>Place</th>
<th>Exhibit No.</th>
<th>Exhibit</th>
</tr>
</thead>
</table>

- Correspondence and advertising matter from Tropical Traders regarding "Ship to Shore Radios".
- Correspondence and photos of life saving equipment used in demonstration 7/8/64.
- Newspaper cuttings March 26th to August 29th, 1964.
- File containing correspondence and statistical data from Department of Primary Industry, Canberra, in reference to Export of Marine Products, and copies of newsletters.
- File containing correspondence from private enterprise, institutions, taxation authorities and Government Departments regarding installations appertaining to the fishing industry in W.A.
- Extract from Traffic Act, Section 46A, regarding Special Permits, handed in by Chief Inspector Napier.
- Letter from Mrs. B. Harper, Mt. Yokine, regarding boat safety and radio communications.
- Copy of Newsletter, July 1964, from A. L. Grigg, Walpole.
- Letter from Genex Pty. Ltd. enclosing cutting from Financial Review.
- Aerial photograph Fremantle Harbour.
- Sample Polyurethane.
- Sample Polylethylene.
- W.A. Insurance Co. forms.
- Edward Lumley & Sons proposal form.
- Search and Rescue Launch, Cocos (photos.).
- Memo from P.M. Products, Fairway "Mirror", marker dye and advertising matter.
- Letter from Rock Lobster/Crayfish Industry Development Asso. of Australia regarding insurance.

### APPENDIX "C" FIG. 2

**WESTERN AUSTRALIA**

**WHITE CRAYFISH PRODUCTION**

<table>
<thead>
<tr>
<th>Block No.</th>
<th>1961</th>
<th>1962</th>
<th>1963</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>lb.</td>
<td></td>
<td>£</td>
</tr>
<tr>
<td>20</td>
<td>41,654</td>
<td>11</td>
<td>7,807</td>
</tr>
<tr>
<td>21</td>
<td>258,939</td>
<td>48</td>
<td>50,876</td>
</tr>
<tr>
<td>25</td>
<td>1,414,143</td>
<td>115</td>
<td>268,359</td>
</tr>
<tr>
<td>30</td>
<td>258,503</td>
<td>115</td>
<td>268,359</td>
</tr>
<tr>
<td>35</td>
<td>1,173,153</td>
<td>60</td>
<td>220,503</td>
</tr>
<tr>
<td>40</td>
<td>1,005,839</td>
<td>135</td>
<td>319,008</td>
</tr>
<tr>
<td>45</td>
<td>1,293,832</td>
<td>189</td>
<td>235,507</td>
</tr>
<tr>
<td>50</td>
<td>32,437</td>
<td>2</td>
<td>4,970</td>
</tr>
<tr>
<td>Totals</td>
<td>6,370,694</td>
<td>613</td>
<td>1,194,673</td>
</tr>
</tbody>
</table>
### APPENDIX "C," Fig. 3

**WESTERN AUSTRALIA**

**FISH AND CRAYFISH PRODUCTION—EXCLUDING "WHITE CRAYFISH"**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>6  50   5  33</td>
<td>1,947  44,831</td>
<td>1  60</td>
<td>1,628,433</td>
<td>7  25</td>
<td>549,214</td>
<td>13  19</td>
<td>1,426,925</td>
<td></td>
<td>102,636</td>
<td></td>
<td>10,623</td>
<td></td>
<td>35  130</td>
<td>66</td>
</tr>
<tr>
<td>1962</td>
<td>3  50</td>
<td>1,947  44,831</td>
<td>1  60</td>
<td>1,628,433</td>
<td>7  25</td>
<td>549,214</td>
<td>13  19</td>
<td>1,426,925</td>
<td></td>
<td>102,636</td>
<td></td>
<td>10,623</td>
<td></td>
<td>35  130</td>
<td>66</td>
</tr>
<tr>
<td>1963</td>
<td>3  50</td>
<td>1,947  44,831</td>
<td>1  60</td>
<td>1,628,433</td>
<td>7  25</td>
<td>549,214</td>
<td>13  19</td>
<td>1,426,925</td>
<td></td>
<td>102,636</td>
<td></td>
<td>10,623</td>
<td></td>
<td>35  130</td>
<td>66</td>
</tr>
</tbody>
</table>

**Totals**

12,511,304 | 10,035,060 | 788,2,342,117 | 659,739 | 12,616,742 | 12,651,274 | 803 | 2,207,918 | 847,676 | 15,545,087 | 11,705,629 | 1,134 | 2,370,792 | 380,826

---

**Note:** The table contains data for the production of fish and crayfish in Western Australia, excluding "white crayfish," for the years 1961, 1962, and 1963. The table shows the block numbers, the quantity of crayfish and other fish, the approximate value, and the number of boats involved in the production.
### APPENDIX “D”

**LIST OF DEATHS OF PERSONS EITHER FISHING OR IN BOATS ON PLEASURE CRUISES**  
28/1/1959-31/5/1964

<table>
<thead>
<tr>
<th>Name</th>
<th>File</th>
<th>Remarks</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>O’Hara, Joseph Gerard; De La Hanty, Mary Joachim; Lynch, Mary Patricia; Terrant, Mary Finbar</td>
<td>69/365</td>
<td>Fibre glass dinghy overcrowded and capsized on Peel Inlet, Mandurah.</td>
<td>28/1/59</td>
</tr>
<tr>
<td>Wilkinson, James Leslie</td>
<td>60/96</td>
<td>Dislodged from catamaran yacht, Albany Harbour.</td>
<td>4/1/60</td>
</tr>
<tr>
<td>White, William Harold</td>
<td>60/2727</td>
<td>14 ft. dinghy with outboard motor overturned in Cockburn Sound.</td>
<td>16/6/60</td>
</tr>
<tr>
<td>Redman, John Henry</td>
<td>60/388</td>
<td>Bondwood dinghy overturned near Garden Island.</td>
<td>8/8/60</td>
</tr>
<tr>
<td>Cordell, Robert Arthur</td>
<td>60/3800</td>
<td>Dinghy swamped by large waves, Port Hedland.</td>
<td>19/8/60</td>
</tr>
<tr>
<td>Kenworthy, John Walter</td>
<td>61/109</td>
<td>Dinghy overturned in Freshwater Bay.</td>
<td>15/1/61</td>
</tr>
<tr>
<td>Dalton, Geoffrey Allan</td>
<td>61/3020</td>
<td>Scout boat capsized in Swan River.</td>
<td>12/8/61</td>
</tr>
<tr>
<td>Heggs, Franklyn Graham</td>
<td>61/4029</td>
<td>Dinghy capsized off Naval Base.</td>
<td>12/8/61</td>
</tr>
<tr>
<td>Cawthill, Ronald James</td>
<td>62/3088</td>
<td>Dinghy swamped and sunk off Rottnest Island.</td>
<td>21/4/62</td>
</tr>
<tr>
<td>Rowe, Victor Williams; Moore, James Gilbert</td>
<td>63/7054</td>
<td>Dinghy swamped in Windy Harbour.</td>
<td>22/6/63</td>
</tr>
<tr>
<td>Watson, Frederick William</td>
<td>63/7733</td>
<td>Daughter fell from speed boat in Swan River, Watson drowned in rescue attempt.</td>
<td>7/9/63</td>
</tr>
<tr>
<td>Gill, Ranjit Singh</td>
<td>68/7738</td>
<td>Racing shell swamped in Swan River.</td>
<td>12/8/63</td>
</tr>
<tr>
<td>Boag, Donald Angus; Hogg, Philippa Jean</td>
<td>68/7218</td>
<td>Dinghy swamped in Murchison River, Kalbarri.</td>
<td>6/2/63</td>
</tr>
<tr>
<td>Buseenschutt, Maxwell Conrad</td>
<td>64/7208</td>
<td>Speed boat capsized on fishing trip near Dongara.</td>
<td>29/8/64</td>
</tr>
<tr>
<td>Hudson, Colin Neil</td>
<td>64/7390</td>
<td>Left Rottnest in rough weather in small boat; body found near Garden Island.</td>
<td>2/3/64</td>
</tr>
<tr>
<td>Bohling, Ronald</td>
<td>64/7318</td>
<td>Dinghy overturned near Ledge Point.</td>
<td>31/6/64</td>
</tr>
</tbody>
</table>
APPENDIX "E."

To the Royal Commission to inquire into Safety of Ships at Sea to which the Marine Act of 1918-1922 applies.

SECTION 1.

The ideal for all craft, which have closed or partially closed wheelhouses, is to have two full sized compasses fitted into proper binacles, or one such compass and binnacle with a periscope device to the steering position. The top compass should have a clear view all round the horizon and be fitted with a proper azimuth mirror for taking bearings. Obviously it is impossible to obtain this ideal in Fishing Boats for the following reasons:—

1. Lack of space in such craft.
2. Cost.

It is therefore necessary to reach some reasonable compromise between the ideal and the practicable which will still allow the compass to be reasonably efficient for its main purposes, namely:—

1. Steering an accurate course.
2. Obtaining bearings from which the vessel's position can be fixed.

SECTION 2.

So that a compass can be brought up to a reasonable degree of efficiency, by proper compass adjustment, the following are the minimum requirements:—

(a) The compass should be in good condition (the liquid clear, free from debris and bubbles, the markings on the card easy to read, the magnet system free of pivot friction and the gimbal free).
(b) It should be of reasonable size.
(c) There should be proper places in which the magnets can be fixed.
(d) There should be soft iron correctors if needed for the craft involved.
(e) The compass, from which at least most of the horizon should be visible, to be fitted with an azimuth mirror. An auxiliary bearing device, such as a hand bearing compass or pelorus, to be provided if this section can't be complied with.
(f) The compass to be so sited that it will not be unduly interfered with by any varying magnetic or electrical influence.
(g) There must be a reasonable assurance that the deviation will, under normal circumstances, be fairly steady between compass adjustments.

Such compass adjustments should be done after every re-fit and at intervals of not more than twelve months.

SECTION 3.

As a reasonable compromise and still fulfill the minimum requirements enumerated above I respectfully suggest the following:—

Ref. Sect. 11 (b)
The minimum compass size should be related to the craft's length.
c.g. 4 in. for craft under 40 ft.
5 in. for craft between 40 ft.—60 ft.
6 in. for craft over 60 ft.

Ref. Sect. 11 (c)
Where there is no Compass Binnacle there should be:—

(a) Either:—
(i) A horizontal wooden platform at least 6 in. wide extending a minimum of 18 in. on each side of the compass in the athwartship line and one such platform in the fore and aft line either forward or abaft the compass, or
(ii) the compass to be fitted on a wooden box at least 15 in. deep.

(b) The fore and aft and athwartship lines through the centre of the compass should be plainly marked on such platforms or boxes.

(c) Directly under the compass should be a 1 in. thick piece of wood with holes for taking Vertical Magnets or some other suitable device for correcting Vertical Force.

Ref. Sect. 11 (d)
(a) Soft iron correctors must be fitted in all steel craft and in all craft where the quadrantal deviation is appreciable (i.e. 2°).

(b) When such soft iron correctors are needed the compass should either:—
(i) be in a proper binnacle, or
(ii) on a box such as mentioned in Ref. Sect. 11 (a) (ii) with, in addition, the athwartship platform mentioned in (a) (i) for the soft iron correctors.

Ref. Sect. 11 (e)
All craft over 30 ft. in length should have some means of taking bearings either directly from the compass (which is preferable), by hand bearing compass or pelorus.

When such hand bearing compass be used it must be used in a position as clear of magnetic and electrical influence as possible and from the same position for each series of bearings.

The option of a hand bearing compass should not be extended to steel craft as deviation varies so greatly with the slightest movement in position.

Ref. Sect. 11 (f)
(i) The compass should be in the centre line for all steel craft and as near the centre line as is practicable in all other craft.
(ii) No moving ferrous material should be allowed near the compass (i.e. steering wheels, gear levers, throttles, etc.).
(iii) Electrical equipment should be at a safe distance from the compass. Firms supplying such equipment should supply not only the distance at which the effect of such equipment on the compass is negligible (this is normally done but the distance at which the effect is small (i.e. 1°). Then as a compromise due to the lack of space in such craft such equipment should be fitted not closer to the compass than the distance at which the effect is small.
(iv) Magnetic Automatic Pilot Compasses should be subject to such regulations as are applicable to them.
To obtain a good compass adjustment it is best to use large magnets at large distances, but such magnets would induce magnetism in any ferrous material close to them and over a period of time would produce sub-permanent magnetism in such material. This would make the compass adjustment useless.

The previous recommendations have been made with the idea that small low powered magnets comparatively close to the compass would be used. This would decrease the possibility of ferrous material in the vicinity of the compass being magnetized by the adjusting magnets.

Even then to obtain a reasonably steady adjustment it is essential that there should be no ferrous material:

(i) between the magnets and compass,
(ii) within 18 in. of the compass,
(iii) too close to the magnets.

**IN CONCLUSION**

I would like to make the following suggestions:

(i) Before a craft is built a plan of the Wheelhouse should be submitted to the Department of Harbour and Light. Such plan should clearly indicate the size, type and position of the compass, all ferrous material and electrical equipment. Details for all electrical equipment should be supplied as required by Section 111 Ref. Sect. 11 (f) (iii). No construction to start until the plan has been passed and a check to be made after construction to see that the plan has been complied with.

It would be too expensive to alter craft already built to comply fully with Section 111 Ref. Sect. 11 (f) and (g) and some compromise would be necessary.

(ii) To police the regulations a Surveyor with a Compass Adjuster’s License should be appointed to the staff of the Department of Harbour and Light. This person to operate on the same basis as the Ministry of Shipping and Transport Surveyors — namely that they do not compete with private Compass Adjusters but are available to do compass adjustment when no private Compass Adjuster is available. There will be more than sufficient work for such a Staff Surveyor with policing the regulations, Outport Compass Adjustment, which is not possible either for economic or business reasons for private Compass Adjusters to carry out, over-flow of compass adjustment in the busy season without taking into account the extra survey work which will be called for by any new regulations that come into force or the tightening up and policing of present regulations.

(iii) (a) The examination syllabus be enlarged to include for all grades of certificate the obtaining of compass deviation by at least amplitudes and transits.

(b) Although there should be no examination in the subject every candidate for a certificate should have at least one hour practical instruction in the care and maintenance of compasses, the effect of ferrous material on the compass and the taking of bearings by hand bearing compass and pelorus. This instruction to be given by the Compass Adjuster-Surveyor previously mentioned or by some qualified person, preferably a Compass Adjuster, approved by the Department of Harbour and Light.
### APPENDIX ‘F’

**SCHEDULE OF W.A. COASTAL LIGHTS AND PROPOSALS**

<table>
<thead>
<tr>
<th>Position</th>
<th>Range</th>
<th>Candle Power</th>
<th>Height</th>
<th>Distance from established light</th>
<th>Distance from previous point</th>
<th>Priority</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>W.A./S.A. Border</td>
<td>Miles</td>
<td>Miles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Termination Island</td>
<td>15</td>
<td>6,000</td>
<td>100</td>
<td>450</td>
<td>C</td>
<td>Establish</td>
<td></td>
</tr>
<tr>
<td>Figure of 8 Island</td>
<td>20</td>
<td>6,000</td>
<td>300</td>
<td>33</td>
<td>C</td>
<td>Already approved</td>
<td></td>
</tr>
<tr>
<td>Hood Point</td>
<td>20</td>
<td>6,000</td>
<td>300</td>
<td>33</td>
<td>C</td>
<td>Establish</td>
<td></td>
</tr>
<tr>
<td>Breaksea Island</td>
<td>25</td>
<td>1,000</td>
<td>300</td>
<td>85</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eclipse Island</td>
<td>27</td>
<td>1,100,000</td>
<td>400</td>
<td>10</td>
<td>B</td>
<td>Establish</td>
<td></td>
</tr>
<tr>
<td>Irwin Point</td>
<td>20</td>
<td>6,000</td>
<td>230</td>
<td>47</td>
<td>A</td>
<td>Increase power</td>
<td></td>
</tr>
<tr>
<td>D’Entrecasteaux</td>
<td>22</td>
<td>6,000</td>
<td>380</td>
<td>100</td>
<td>A</td>
<td>Increase power</td>
<td></td>
</tr>
<tr>
<td>Cape Leeuwin</td>
<td>20</td>
<td>76,000</td>
<td>155</td>
<td>51</td>
<td>A</td>
<td>Increase power</td>
<td></td>
</tr>
<tr>
<td>Hamelin Island</td>
<td>16</td>
<td>160,000</td>
<td>116</td>
<td>12</td>
<td>A</td>
<td>Increase power</td>
<td></td>
</tr>
<tr>
<td>Cape Naturaliste</td>
<td>20</td>
<td>1,233,000</td>
<td>404</td>
<td>41</td>
<td>A</td>
<td>Increase power</td>
<td></td>
</tr>
<tr>
<td>Bumbury</td>
<td>17</td>
<td>1,000</td>
<td>142</td>
<td>34</td>
<td>A</td>
<td>Increase power</td>
<td></td>
</tr>
<tr>
<td>Cape Boward</td>
<td>18</td>
<td>6,000</td>
<td>150</td>
<td>40</td>
<td>B</td>
<td>Establish</td>
<td></td>
</tr>
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* Already installed.
APPENDIX "G"

In reply to your letters dated 12th August, 1964 and 1st September, 1964, a summary of the taxation concessions granted to the fishing industry is set out hereunder.

SALES TAX

2. Persons engaged in the fishing industry are entitled to exemption from Sales Tax in respect of goods covered by Items 20A and 119 to the First Schedule of the Sales Tax (Exemptions and Classifications) Act. A copy of each of these Items is attached.

3. The exemptions so provided embrace such goods as life-buoys, life jackets, life-boat and life raft equipment—for example, water tanks, hand flares, red flare lights, smoke signals and search lights.

4. Goods excluded from the exemptions are those in the nature of furniture or those associated with what may be termed his domestic aspects of operating a vessel—cleaning materials and equipment, cooking utensils, etc.

INCOME TAX

5. The Income Tax and Social Services Contribution Assessment Act provides that—

"fishing operations" means—

(a) operations relating directly to the taking or catching of fish, turtles, dugong, crustaces or oysters or other shell-fish;

(b) pearl fishing operations;

and includes oyster farming, but does not include whaling and also does not include operations conducted otherwise than for the purposes of a business.

6. The special income tax concessions available to a taxpayer deriving income from fishing operations are—

(i) in the calculation of the tax payable, such a taxpayer, other than a company, is subject to the "average" provisions. In brief, tax is assessed on his taxable income for the year, but at the rate applicable to the average of his taxable income over the prescribed period (generally, five years). When his income is increasing, his average income is less than his taxable income and so the provisions operate to his advantage by reducing the rate of tax to be imposed. If, however, because of a downward trend in his income, the provisions would operate to his disadvantage, he may elect not to have them applied. Such an election, when made, is irrevocable; once having elected to be assessed without reference to average, a taxpayer cannot reverse his choice in some subsequent year. Where the taxable income or the average income exceeds £4,000, the averaging provisions have only limited application.

(ii) Plant and equipment used wholly and exclusively for fishing operations may be written off over five years instead of at the normal rate of depreciation. This accelerated depreciation rate applies in respect of plant and equipment first used or installed ready for use after 30th June, 1968 and before 1st July, 1967. It does not apply to motor vehicles designed primarily and principally for the transport of persons—e.g., motor cars, station sedans.

(iii) Structural improvements (e.g., workshops, jetties, slipways, and within limits, accommodation for employees) completed after 30th June, 1958 and before 30th June, 1967 (or 30th June, 1968 in some circumstances) used wholly and exclusively for pearl operations, and situated at or in the vicinity of a port or harbour from which the pearl operations are conducted, may be written off over five years. This concession extends only to the pearl section of the industry; it does not embrace structural improvements for the purposes of other fishing operations.

(iv) A deduction may be allowable for twenty per cent. of the cost of new (not second-hand) plant acquired after 14th August, 1963. The deduction, where it is applicable, is additional to depreciation, and is allowed in the first year in which the plant is used, or is installed ready for use, for the purpose of producing assessable income. Various items are expressly excluded—for example, structural improvements, road vehicles of the kinds ordinarily used for transporting persons or goods, office equipment, household equipment wireless receivers and transmitters, television receivers and antennae, containers for delivery purposes, cooking appliances, miscellaneous equipment (anchors, buoys, chains, lines, nets, sails, etc.), hand implements and hand tools.

20A—(1) Equipment and materials for use in the fishing industry, namely:

(a) Boats (including life-boats), oars, sails, life-belts and similar accessories;
(b) Crayfish pots;
(c) Engines;
(d) Nets and netting for fishing and cotton, hemp twine and other materials for the repair of such nets and netting;
(e) Lines, hooks, floats and sinkers;
(f) Refrigeration equipment and refrigerating agents—

(i) for use exclusively or primarily and principally by a person engaged in the fishing industry in the preservation of fish or other marine animals produced by him;
(ii) for use exclusively or primarily and principally by an authority constituted under a State Act, being an Act relating to the marketing of fish, in the preservation of fish or other marine animals; or
(iii) for use exclusively or primarily and principally by a co-operative company or society in the preservation of fish or other marine animals produced and supplied to the company or society by members of the company or society engaged in the fishing industry.

(2) Parts for equipment covered by sub-item (1) of this item.

119—(1) Ships and other vessels, but not including those to be used exclusively or principally for purposes of pleasure, sport or recreation either by the owner thereof or by any other person or persons.

(2) Equipment (being machines, implements or apparatus) for use on ships or other vessels covered by the last preceding sub-item, but not including—

(a) goods covered by an item in the Third Schedule to this Act;
(b) goods for use in, or in connexion with, the preparation or consumption of foodstuffs or beverages;
(c) goods for use for the comfort, entertainment or recreation of the crew or passengers; or
(d) equipment for use for cleaning or polishing or of a kind ordinarily used for domestic purposes.

(3) Parts for goods covered by Sub-item (1) or (2) of this item.

(4) Materials for use in the construction or repair of, so as to form part of, goods covered by this item.

By Authority: ALEX. B. DAVIDS, Government Printer