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WORLD MARITIME UNIVERSITY
MALMÖ, Sweden

MARITIME ADMINISTRATION IN PAPUA, NEW GUINEA
"AN EMPHASIS ON PROBLEMS"

by

Tony Amao

Papua New Guinea

November 1985



A paper submitted to the Faculty of the World Maritime University
in partial satisfaction of the requirements of the
GENERAL MARITIME ADMINISTRATION COURSE.

The contents of this paper reflect my own personal views and are
not necessarily endorsed by the UNIVERSITY.

Signature:

A handwritten signature in black ink, appearing to read "Tony Amao", written in a cursive style.

Date: 01 November 1985

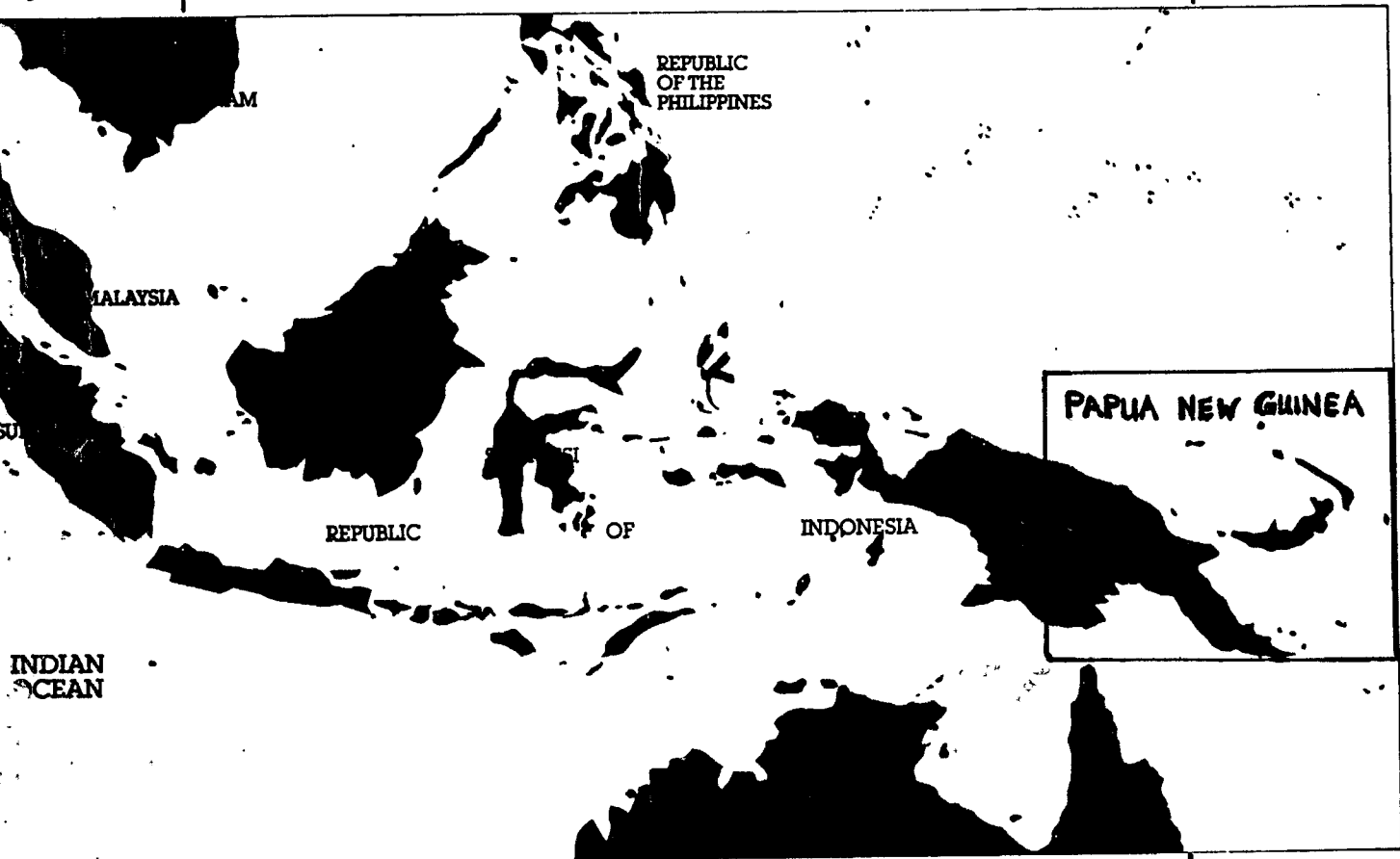
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PAPUA NEW GUINEA

IN RELATION TO

IT'S NEIGHBOURS



LIST OF ABBREVIATIONS

1. PNG -- PAPUA NEW GUINEA
2. IMO -- INTERNATIONAL MARITIME ORGANISATION
3. ILO -- INTERNATIONAL LABOUR ORGANISATION
4. FSB -- FREIGHT STUDY BUREAU
5. SAR -- SEARCH AND RESCUE
6. STCW-- STANDARDS OF TRAINING CERTIFICATION AND WATCHKEEPING
7. PFL -- PACIFIC FORUM LINE
8. SPEC -- SOUTH PACIFIC ECONOMIC CO-OPERATION

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CIVIL AVIATION

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PREFACE

The title of this paper is "Maritime Administration In Papua New Guinea" because this will be the main subject being covered by the paper, but the sub-title is "Emphasis On Problems" because problems of Administrations are more specific to each individual country. Maritime Administrations on the other hand are rather similar no matter how big or small it maybe. Problems of Administrations are rather unique to each country, depending very much on the individual countrys size, its strategic position in relation to the sea and its stage of socio-economic and political advancement etc. But off course there are problems which are common to most developing countries. This paper therefore attempts to throw some light on some common problems experienced by the Papua New Guinea Administration.

It is obvious that in the beginning of the paper, a broad survey of the main branches of the Governmental shipping administration will be presented whilst it is essential that certain more abstract organisational principles will be discussed and evaluated.

The bulk of the materials presented is an expression of the writers own experiences gathered through six years of working experience with the Administration in various capacities ranging from projects officer to Acting Director of the Administration. The paper is divided into three main sections, the first section is basically introductory, aimed at presenting a rather broad overview of Papua New Guinea in terms of its

history, geography, population, economy and the government. Also a brief description of the Department of Transport is presented since the Maritime Administration is part and partial of the main Transport Department. In the second section a detail description of the functions and responsibilities of the Maritime Administration has been discussed. In the final section some of the major problems of the Administration has been presented and concluding with some general remarks and recommendations.

- CHAPTER I -

INTRODUCTION

1.1 History

In the 16th century Portuguese navigators sighted one of the worlds largest islands - Papua New Guinea. From that point on, Europeans explorers from Spain, Portugal, France, Germany and the Netherlands sailed along the coasts and around the Islands naming land features and waterways after their regents, relatives, ships and themselves.

European colonisation began in 1884 when the two rival powers - Germany and Great Britain formally raised their flags on the north coast and the south coast respectively. A formal division was made between German New Guinea and British New Guinea, later renamed Papua, in 1886.

At the turn of century Australia became independent from Britain and asumed responsibility for Papua with the onset of the World War I, Australia annexed German New Guinea and administered the two territories until World War II when Japanese forces occupied the north coast and New Guinea Islands Region.

At the end of the war, the United Nations approved Australias mandate to administer New Guinea under trusteeship. At the same time provision was made to link the trust territory in an administrative union with, Papua. In 1949 the Territory of Papua New Guinea came into being under one administration maintained by Australia. The Australian Government then announced its intention to bring the country forward to Self Government and Independence.

The dream became a reality, and on 1st December 1973 Papua New Guinea became Self Governing and on the 16th September 1975 the country became an Independent State (1).

Today PNG has its own currency and banking system, its own defence force, its own transportation system, a national shipping line, and a national air line and its urban centres with crowds of city and country folks and highways jammed with traffic.

Despite these changes, the country maintains a pleasing personality, one which draws inspiration and magnificent landscape.

1.2 Geography

With in the Southern Tropics, North of Australia PNG comprises the Eastern half of the Island of New Guinea - the Western half forming Irian Jaya, which is part of Indonesia. With a land area of approximately (465,000 square kilometres) PNG indeed is one of the largest Islands in the South Pacific apart from Australia and New Zealand.

The mainland, the Eastern half of the Island of New Guinea, and the larger Islands are mountainous and rugged. The highest mountain range rises to more than 15,400 feet (4,700 metres).

The mountains are the source of fast flowing rivers that descend to the coastal plains to form some of the largest rivers, the Fly and Sepik are navigable up to 800 kilometres. Six of the countrys nineteen provinces can be characterised as Island or essentially Maritime Provinces.

The country has 18 major sea and rivers ports of which 16 are operated by the Papua New Guinea Harbours Board, further two by the companies managing the major minning developments. These two ports are relatively well equiped in terms of wharf capacity, storage and handling facilities. These are in addition to others (involving vessels of 10 metres and longer). These often have minimal or no facilities being little more than recognised anchorages.

3.1 The Government & Population

Papua New Guinea is a parliamentary democracy, and Queen Elizabeth II is the Head of State represented by the Governor General. The Prime Minister is the Head of the National Execeive Council, which functions as the Governments Cabinet. The country has 19 provinces, each with its own Provincial Government, with full financial autonomy.

The present estimate of PNG population amounts to approximately 3.3 milion, however according to 1980 national census it was 3 milion.

1.4 Trade

Apart from Copper and Gold, Papua New Guinea still depends very much on export of agricultural commodities such as coffee, cocoa, palm oil, tea, timber and rubber. Australia, Japan, USA and the EEC are the countrys major export markets and changes to this pattern is unlikely in the immediate future (2).

PNG like many countries of the world faces sharp increases in the prices of imported goods over the recent years. The Government is encouaging import substitution. It is expected that import of consumer of goods will eventually rise as a result of large

scale development projects.

1.5 Definition of Maritime Administration

The title of this paper is Maritime Administration because this will be the subject being presented but as the sub-title indicates the main emphasis will be to try and highlight the major problem areas experienced by the PNG Administration, as seen from the point of view of the writer.

It is therefore necessary that I should try to define in my own view what is meant by Maritime Administration, the writer is very much aware the notion of Administration does differ from country to country. I should therefore like to begin with a broad definition in this regard, it can be said that a Maritime Administration relates to the whole spectrum of Governmental activities in respect of Merchant Shipping.

Speaking of a broad and general meaning of Maritime Administration, it comes to my mind the case of the United States of America, where the whole spectrum of Maritime Administration has been split between the Federal Maritime Commission and the US Coast Guard, with the former being responsible for Merchant Shipping and conferences whilst the latter is responsible for all matters relating to ship safety.

I would now like to return to the specifics of Maritime Administration and here it can be said that almost any Maritime Administration have two major sub-divisions namely Shipping Policy and Ship Safety.

This is the case in Papua New Guinea with the two sub-divisions being Shipping Operations which deals with all matters relating to ship safety, such as ship surveys aids to navigation, casualty investigations, and search and rescue, whilst the Shipping Services branch deals with ship registration and all matters relating to shipping policies. A detail description of each of the above mentioned activities has been discussed in chapter III.

- CHAPTER II -

THE DEPARTMENT OF TRANSPORT AND CIVIL AVIATION

The PNG Department of Transport and Civil Aviation is one of the largest National Government Departments (like the Federal Departments in Australia and Canada) apart from Departments of Health Education, Police and Public Works. Although it is not the primary task of this paper as the title indicates, it is however essential that a broad view of the Department under which the Maritime Administration operates would make a good starting point.

Department of Transport and Civil Aviation as mentioned earlier is quite a large Department comprising of (approximately 3,000 employees) of which the Maritime Administration is a portion of it, (approximately 900 employees). If we compare PNG Department of Transport with the Canadian Department of Transport with the total work force of approximately 22,000 and of which 1,700 are employed in the Maritime Administration, the PNG Department of Transport certainly looks much smaller in size, but off course this can be expected as Canada is about four times the size of PNG.

In order to get a better understanding of the Maritime Administration it is equally important to begin with the overall framework of the Department responsible for all modes of transport.

Because of PNGs large land mass, lengthy coastline and relatively small population fairly well scattered, a safe and efficient national transportation system is required. The responsibility of providing much needed and dependable transportation system lies with the Department of Transport and Civil Aviation.

Before Independence in 1975 the present functions of the Department was scattered with the other Government Departments eg, the Maritime Administration was part of Department of Customs and Commerce, whilst the Civil Aviation Administration remained as part of Australian Civil Aviation Agency. Immediately after Independence in 1975 an office of Transport was created which brought all the elements of transport together, except the Civil Aviation remained under the Australian Civil Aviation Agency until 1978, when the present Department received its Departmental Status with the appointment of the Departmental Head. Today the Department is composed of three major divisions each dealing with a particular mode of transportation along with the Policy and Planning and Central Administration.

2.1 The Civil Aviation Administration

The Civil Aviation Administration, or sometimes called Air Transport Division is responsible for providing and operating domestic airway facilities, national air terminal systems and the regulatory services needed for Aviation safety eg, certification of airline

pilots and air traffic contrallers. It is also responsible for the provision of air traffic control and international airway facilities and services. Another area of responsibility includes airport construction services, regulatory and Administration services.

2.2 The Land Transport Administration

The Road Transport Administration is responsible for all matters pertaining to the safety of motor vehicles, through its motor vehicles registration system. It also ensures that all vehicles meet the minimum requirements as stipulated in the Motor Traffic Regulations. Another major responsibility of the above Administration is to ensure that all public motor vehicles are licenced, and that the services provided to the public by such licenced operators is efficient for the public.

2.3 The Policy And Planning Division

The Policy and Planning element of the Department of Transport is the main advisory body to the Department and the Ministry in terms of the present transportation Policy and the future development fo transportation facilities.

It also co-ordinates all projects and the plans of all the modes of transport and ensures that each modal plans and activities are in conformity with the National Aims and objectives.

The Policy and Planning Branch also maintains a systemetised approach to the operational planning activities of the modal divisions or the modal Administration. It also ensures that modal Administrations

co-operate with each other so that specific programme complies with the overall plans of the Department in terms of time and resource availability (3).

A feed back information system is also maintained and the variances are assessed and recommendations are made to ensure corrective action. Finally but not the least is that the branch maintains continuous liason with the 19 Provincial Governments and other national agencies concerning planning and programming, in order to avoid unnecessary duplications and wastage of scarce resources.

2.4 The Maritime Administration

The PNG Maritime Transport Administration is responsible, as the title suggests, is concerned with responsibilities such as, ships safety inspections, provision of aids to navigations, except responsibilities of pilotage which has been delegated to the PNG Harbours Board. The Administrations other major area of responsibility is to ensure that the coastal shipping is regulated through its licencing system, in order to ensure efficiency on the coast. This is only a brief introduction to the above Administration, since it is the main subject of these paper it is not necessary to discuss any further details.

2.5 Finance And Administration

The Finance and Administration differs from the branches in that it does not play an operational role, but a supportive role by providing a service function to the other branches of the organisation mentioned above.

In order to fulfil its service role, the Finance and Administration Branch, is responsible for the following task:-

1. Financial planning and budgeting and reporting.
2. Financial accounting.
3. Supplies, purchasing and asset management.
4. Office services (Administration).
5. Staff development and training.
6. Personnel Administration.

2.6 In concluding this chapter, I would like to draw some attention to the departmental organisational chart (see annex I).

It is important to emphasize at this juncture that the majority of the various branches of the department are closely co-operating with each other in order that duplication of activities are avoided as much as possible. The Maritime Administration works very closely, for example with the Finance and Administration which is competent in areas such as budgeting, staff developing and training and personnel Administration. The Maritime Administration also works very closely with the Policy and Planning Branch, since shipping policy is of course part and parcel of the country's overall transportation policy.

- CHAPTER III -

THE MARITIME ADMINISTRATION

Like all island nations Papua New Guinea is dependent upon the sea ships, shipping is the oldest and most important form of transport for the Coastal people. Over the years shipping has not lost its central role in the life of the nation, on the contrary the need for shipping has become more important. The type of shipping need has changed, from its traditional canoe to the workboat and more recently to modern cargo vessels. These changes has come about because of the need to transport larger volumes and units of cargo. The importance of shipping has been overshadowed by the introduction of trucks and aeroplanes. But these forms of transport have their own specific rôles to play which should be seen as complimentary to shipping within the frame work of transport in PNG.

As in all forms of development where industries grow larger and become more complex, the Government has responsibility to ensure the industries expand in the most effecient and safe manner. In order to control this expansion, legislation was introduced in Parliament. This has been the case with the shipping industry and the legislation is known as the PNG Merchant Shipping Act (1974), which is being enforced by the Maritime Administration of the Department of Transport and Civil Aviation.

3.1 Role of Maritime Administration

The Maritime Administration is responsible for the control, through the implementation of the Merchant Shipping Act, of the coastal

shipping in the country. Papua New Guinea ships involved in the overseas trade, and for advising other Government Departments on all shipping matters.

The Administration has two main branches -(a) shipping services is primarily a regulatory and control body responsible for the implementation and policing of the Merchant Shipping Act. (b) shipping operations is primarily responsible for the efficient running of the Government fleet vessels, Navigational aids services and previously Search and Rescue Operations.

The Administration objectives or roles falls into four main categories:-

1. improved safety of all PNG ships.
2. improved shipping services throughout PNG.
3. extending PNG involvement in overseas shipping and trade.
4. Training PNG citizens to administer and operate the shipping industry (4).

The remaining part of this chapter will attempt to give some specific details of various functional activities of the special sections of the Administration which ensures that the above objectives are being implemented.

3.2 The Organizational Structure

The organizational structure of PNG Maritime Administration reflects its objectives as mentioned. The Director of Maritime Administration reports to the Secretary of The Department of Transport and Civil

Aviation which is based at The Headquarters in Port Moresby. All matters affecting the Administration both in terms of Policy Administration are channelled to the Ministers office through the Secretary of the above mentioned Department however under certain sepecified circumstances the Director of Maritime Administration is granted authority to report to the Minister direct. One of such special circumstances is in his capacity as Chairman of the Coasting Trade Committee, which is a committee of advise to the Minister on all matters of coasting trade, more specifically on matters of liciencing of Coastal vessels and Coastal freight rate determinations.

Assisting the Marine Director are two assistant Directors, both of whom are also located at the Head Quarters. Reporting to the Director are five regional controllers based in the following locations, Port Moresby, Daru, Alotau, Rabaul and Madang (see organisation chart annex II).

The regional controllers are concerned with the day-to-day operational aspects of the organisation. The regional controllers are assisted by Marine Surveyors and Administrative staff in areas of ship safety and administration respectively. The surveyors as far as functional responsibilities are concerned reports directly to the Principal Surveyor at the Headquarters but reporting to the controllers on administrative matters.

3.3 Ships Safety (Survey Section).

The survey section which I prefer to call ships safety branch is responsible for inspection of ships to ensure that they are in good

condition, stable and carrying at least the minimum amount of the life saving equipments. These functions is being attended to by ex-seafarers majority of whom has been recruited from the United Kingdom with certificates of competency as either Master Mariner or first class engineer foreign going. The above category of personnel can not be obtained in PNG therefore the country had to go through a great deal of expense in order to maintain its obligation for safe shipping. This is the main problem area experienced by PNG administration since the introduction of the Merchant Shipping Act. The problems of recruitment of personnel will be discussed much more in detail in the later part of this paper.

When vessels fulfils the requirements of the Merchant Shipping Act, it is issued with a survey certificates in the similar manner as other Maritime Administration. At some levels of operation it is not desirable at this time to strictly enforce the Merchant Shipping Act. Problems of implementation vary at different levels of shipping. For example in the mainport trade, the larger mainport ships now comply with the regulation. However at the other end of the scale, at what is known as the village level, vessels less than 15 metres are allowed certain exemptions from the regulations to encourage the growth of shipping services at this level.

The survey section will continue to administer the surveying of vessels and safety equipment, advice industry and other Government Departments on matters concerned with the construction of small boats and compliance with the Merchant Shipping Act, (see annex III for survey Ports).

3.4 Shipping Administration (Ships Registry)

All maritime nations have, in some form, a system of registration or documentation for their shipping. The system in force in PNG is governed by the PNG Merchant Shipping Act of 1974. Under the provisions of the Act all vessels over 10 metres are by law required to register, and must hold a port of registry. In PNG the above section monitors the manning of ships to ensure that the Master and Crew are properly qualified, in doing so it maintains records known as the "Articles of Agreement" which of course is a standard practice throughout the world. The section's major task is also to maintain the register of PNG ships.

Registration of vessels proves title to that vessel, and he who is shown on the registry as owner, is the legal owner. A registered ship or share therein can be used as a security for loan.

PNG is not an open registry country, in fact vessels registered in PNG are largely of national content where the operation of such vessels are of national character and identified by register of companies and fully registered in PNG, thus subject to all law and regulations of PNG.

3.5 Navigational Aids

The navigational aids section is responsible for Hydrographic Surveys and Navigational Aids Units. At the present the government does not have a hydrographic survey vessel, thus all surveys for development projects are undertaken by contractors to the administration. Until such time as the unit operates its own vessel, this section will continue to monitor such surveys. The surveys will be undertaken in areas where primary

industry development projects require sea transportation. A chart depot in Port Moresby sells hydrographic chart, tide and nautical tables and other marine publications.

The other major task of the navigational aids section has been the task of providing fixed and floating aids to navigation. This section over the past three years embarked on a major programme of installing new marine aids to navigation. This is keeping inline with the administrations policy of replacing old gas equipment at more inaccessible sites with more modern electrical system. In the past years solar powered lights have been tested and installed at various locations. These has proved very successful and the intention now is to install similar systems at those sites which would be the most economically visible.

Inorder to have this section functioning effectively and to the satisfaction of the shipping community. The Navigational Aids Advisory committee is appointed by the Minister and it is intended to advise the Minister on the user requirements of the marine aids to navigation and also allows the shipping industry to be involved in the allocation of the navigational aids contribution.

It is compulsory for vessels both coastal and overseas ships calling at PNG ports to pay navigational aids contribution, where as in countries such as Netherlands, Canada, Norway and Sweden just to mention a few countries, the cost of providing aids to navigation is paid for directly by the government from its public funds.

The PNG Harbours Board collects the navigational aids dues on behalf

of the administration, which is returned to the government's general revenue pool, and is not necessarily used for the provision of aids to navigation. Instead a fresh allocation is made to the Navigational Aids Section to maintain its operations through an annual budget allocation, like all other government departments.

The navigational aids operates out of its operational base depot in Madang. The present lighthouse tender was built in Singapore at a cost of approximately US 2.5 million, and is now fully operational.

3.6 Marine Search and Rescue and Pollution Prevention

The function of Marine Search and Rescue has been transferred from the administration and the responsibilities are now being carried out by the National Surveillance Agency. However in spite of transfer of such responsibilities, the National Surveillance Agency is basically a co-ordinating body, the actual search and rescue operation is being carried out by qualified seafaring personnel from both the PNG Defence Forces maritime element and officers of the administration at various regional offices and headquarters.

The administration still maintains responsibility for Oil Pollution Control. Formulating a Marine Anti-Pollution Plan was an area which has received attention over the past few years.

A conference was held in January 1980, was attended by representatives of:-

1. Maritime Administration
2. Papua New Guinea Harbours Board

3. Office of Environment
4. Department of Primary Industries & Fisheries Division
5. PNG Defence Force
6. Shell and Mobil Oil Representatives
7. National Emergency Services

The purpose of the conference was to collect information about the resources and facilities available to each body for consideration in Papua New Guinea Anti-Pollution Plan Formulation.

The administration purchased anti-pollution gear, full sets of offshore and inshore equipments are placed at most of the mainports in PNG.

At the kind invitation of PNG Government a seminar on Marine Pollution Prevention, Control and Response was held in Port Moresby in April 1982. The seminar was jointly sponsored by the Department of Transport and Civil Aviation and International Maritime Organisation (IMO) with financial assistance provided by the Swedish International Development Authority (SIDA) and the United Nations Development Programme (UNDP) (see annex VII) for details of National Oil Pollution Plan.

3.7 Freight Study Bureau (FSB)

The freight study bureau monitors all information concerning the amount of cargo carried, both coastal and overseas and the freight rates that are charged for the carriage of cargo. This information is used to produce quarterly and annual statistics of cargo movements and in the negotiations between shippers when changes in freight rates are proposed. Information is also collected on the size of ships and their operating routes and is used, when a shipowner applies for a coasting

trade licence which is issued by the FSB. Over the past years it has been the policy of the administration to aim at up-dating the coastal fleet and encouraging scheduled services. To promote this policy the administration introduced licencing system in 1977. Ships are licenced for a period of time dependent on their age, conditions and suitability for coastal operations.

In all this respects the FSB has played a very useful and a very important role in ensuring that adequate and most up-to-date statistical data is available for effective implementation of Government Policies. It is envisaged that in the near future the FSB would be strengthened with much more sophisticated computer system to store and continually update its system. The FSB has not been only useful for the government, but it has been of great benefit to the shippers council of PNG who are not yet organised to be able to effectively bargain with the more organised shipowners association.

It is the administrations hope that soon the shippers would organised themselves with a secretariate of their own thus relieving the administration of its responsibilities of assisting the shippers.

3.8 The Government Fleet

The function of the government fleet is more or less a direct service function to the other Government Departments. It operates a pool of workboats ranging between 10 to 25 metres in length.

The fleet was establish as part of the administration in the early post - war years, to service the administrative needs of the government.

These needs included census, health, police and magistrate patrols, famine relief, anti-malaria spraying, search and rescue and navigational aids services and plant and equipment carriage. In 1972 the purpose of the fleet was extended to include the provision of services at a charge for private users to those coastal points not normally visited by commercial shipping.

The decentralisation of the administrative function of government with the formation of Provincial Governments in 1978 had a significant impact on the structure and mode of operation of the fleet. Charges for all users including Government Departments and Provincial Governments were established, whilst the Provincial Governments received grants from the Central Government for the purposes of hiring marine services, either from the government fleet or private operators. The fleet now has approximately 60 vessels with an average age of 15 years based at seven centres throughout PNG (5).

It is envisaged that over the next few years this particular operational function of the administration will be transferred to the Provincial Governments who will take full responsibility for maintaining it and operating according to their individual needs. The administration hopes to retain few of its modern crafts from the fleet for the purposes of search and rescue and combat of Oil Pollution. Finally it must be mentioned that this particular function has been a biggest drain on the government finance therefore once the function ceases from the administration it is the administration hope that funds would than be diverted to other pressing needs of the marine administration.

- CHAPTER IV -

THE PNG SHIPPING POLICY

Papua New Guinea is an Island nation whose economy is heavily dependent on sea transport, owing to its very limited industrial development, the country relies to a great extent on the importation of semi-finished goods from abroad. Its exports are mainly Primary products such as timber, rubber, coffee and cocoa. The cost of air freight is high and ships offer a far cheaper means of importing and exporting bulk consignments.

The main Policy consideration with regard to sea transport is the creation of a suitable environment for the best conduct of coastal shipping between the mainports and from the mainports to the feeder port.

In the past more emphasis has been given to road and air transport and less on the sea transport, however during the recent years the government has stated that the future planning of transport will give more emphasis on coastal shipping. However despite such statement the situation to now has remained unchanged, more emphasis is still been given to the other two modes. In terms of cost recovery, the Maritime Administration returns to general revenue nearly 50% of its annual operating expenditure. I shall not indulge in a debate over the issue of unequitable distribution of resources between the three modes since it is not the purpose of this paper.

The Department of Transport through its Maritime Administration ensures that the shipping policies are effectively implemented in order to

achieve objectives set down by the Government.

The following is a descriptive version of the various policies being presently implemented through the Maritime Administration.

In 1975, the Merchant Shipping Act was first introduced to regulate and control the safety aspects and fleet structure of the coastal shipping industry.

In the long term the policy of the Maritime Administration is to develop a shipping industry and associated organizations in PNG which satisfy the countries needs and to be of a standard that is recognised and accepted by the International Shipping Community.

The Administration is aware that at some levels of shipping operations it is not desirable at this stage to enforce the PNG Merchant Shipping Act in its entirety.

Problems of implementation vary at different levels of coastal shipping operations. In the mainport trades there existed a situation of overtonnage, which created commercial problems. The Administrations policy was to encourage new and modern tonnage on the coast, mainly at the mainport trades. The commercial problems including freight wars amongst the companies is of no concern for the Administration, what is important is the operational safety of the vessels. It is therefore important that at the mainport level vessels do comply with the regulations of the Merchant Shipping Act.

At the other end of the scale, i.e at what is known in PNG as the village level shipping services, there isn't adequate level of services, due to the fact that these services are not commercially viable. At these level the Merchant Shipping Act is being slightly relaxed in the form of exemption from certain requirements of the Act. As number of vessels acquiring the standard increases, exemptions will become progressively more difficult to obtain.

4.1 Coastal Shipping

The major problems that has been facing PNG shipping industry has been one of overtonnage on the main port trades. Over the past 5 years attempts has been made to rationalize the main port shipping, through the amalgamation of few shipping companies forming a consortium, again mainly at the main port trades through pooling of vessels and operating on the main ports. This has resulted in old tonnage been sold and modern tonnage brought on the coast since then there has been a vast decrease in the over tonnage situation.

The shipowners represented by the shipping Association co-operated with the Maritime Administration, whilst the Merchant Shipping Act was being drafted. However since the legislation has come into force its implementation has received less than an enthusiastic welcome due to the attitude of some of the individual shipowners. There has been instances where vessels have been ordered and purchased without information being given to the Maritime Administration and licences for operating these vessels have in some cases, only been sought at the same time as the vessels arrive on the coast. This action has made the control of licencing more difficult and caused a further deterioration in the overtonnaging situation.

Overtonnaging in the mainport trades has resulted in a general level of the freight rates that is well below the maximum published by the Department. This benefit of low freight rates can only be a short term and is short sighted for two reasons :-

1. Depressed freight rates mean that the shipowners are unable to receive a reasonable return on capital thus there is very little, if any, money to invest in modern purpose built vessels. Because of liquidity problems certain companies are in a danger of collapse which would, off course have disastrous consequences on coastal shipping services.
2. The fact that the total capacity of the ships on the coast is far greater than the total amount of cargo on offer means that the load factor is depressed, the net result is a waste of resource (6).

In both the above instances it is the consumer who suffers. This is a situation PNG can ill afford.

As I,ve mentioned earlier, all matters relating to commercial elements of coastal shipping has been left to the industry to deal with amongst themselves. The Maritime Administration has little interference, however from time to time, the situation has deteriorated, and under such circumstances, the Administration has taken a more forceful role; mainly in the area of reducing overtonnage in this case the Administrations short term policy has been :-

1. To delicense progressively older and less effecient vessels of the mainport operators.
2. Not to issue any new liciences for vessels on the mainport trade.

3. Not to allow vessels presently licenced and trading in services other than mainport trade to move onto the mainport services, except under a pooling agreement.

4.2 Overseas Shipping

The PNG shipping corporation has successfully entered the Australian-PNG trade with a fully cellular container vessel. This is the first step in the Administrations policy to promote the carriage of a greater share of Papua New Guinean cargoes in her own vessels. The Overseas Shipping Act has been drafted and soon to be enacted, and when it happens it will give Papua New Guinea legislative backing and protection in overseas trade.

In June 1977 PNG, and nine other Island countries of the South Pacific Region signed a memorandum of understanding and other documents necessary to create the Pacific Forum Line (PFL), PNG is well aware of its responsibilities in regional co-operation and has backed the formation of a Regional Shipping Line. It is intended that the Pacific Forum Line will fill the service gaps currently existing between island states and also will provide a feeder service from designated transshipment ports for their overseas trade.

PNG is a financial member of the Pacific Forum Line and it maintains its obligation through purchase of share capital. PNG has always maintained that the Pacific Forum Line must be operated commercially and effeciently and thus any further moves on PNG,s part regarding the provision of finance or vessel depend on the future performance of the Line.

4.3 Shipbuilding and Shiprepair

In the field of shipbuilding and shiprepair the present facilities are considered to be inadequate and out dated for the needs of PNG. It is the Governments intention to stimulate shipbuilding through some form of joint venture with a private enterprise company. However this have received negative response from the private sector mainly for reasons related to its commercial viability.

Another matter connected with the shipbuilding that has been creating concern has been the number of vessels ~~built for~~ Government Departments without the prior knowledge of the Administration. This has resulted in an embarrassing situation where vessels ~~ordered~~ and built on aid by some Departments have not met the safety specifications outlined in the Merchant Shipping Act and Regulations.

From the beginning of this chapter emphasis has been placed on the coastal shipping policy, whilst there has been no mention of the Governments policy in regards to International Shipping. This has not been purposely omitted but it has stem from the fact that there does not exist any such policy.

The Government as mentioned has concertrated its efforts on ensuring an efficient coastal shipping inorder to ensure an improved internal transport systems. The countrys population is largely scattered therefore the task of providing transport ~~and~~ accessibility has been rather difficult.

Up to now the government has no stated international shipping policy or at least to my knowledge. The carriage of PNGs foreign trade has

been virtually left in the hands of the private sector, that is to say foreign shipping lines. One can only assume that the Government has allowed shipping into and out of PNG on the basis of free enterprise, this is to suggest that in my opinion PNG has taken a more liberal approach towards international shipping. However such an approach will soon to become a history, now, that the UN Code Of Conduct for Liner Conferences is about to come into force. PNG has awoken itself and is becoming more aware of the effects of such international instruments which is bound to have some major impact on the nature of shipping. PNG therefore has seen the need for legislation to affect its overseas shipping thus an Overseas Shipping Act has been drafted which will come into force in the near future.

The country's priority now is to ensure that the internal transport system including the infrastructure have to be developed and operated efficiently. Without proper and efficient internal transport system, the overseas trade in and out of PNG will be hampered. It is therefore important to have an appropriate internal transport system acting as a feeder services to the overseas shipping for internal distribution in order to avoid a "bottle neck" situation.

4.4 Regulatory Policy

Having introduced the basic shipping policy, I would like to make a special mention of PNG's regulatory shipping policy which is unique to PNG where the Minister directly exercises his authority in all matters affecting the coastal shipping. The coasting trade has been subject to a lot of criticisms from external agencies such as the World Bank, which states that the coasting trade was over regulated.

The World Bank, suggested that the whole of the coasting trade should be de-regulated implying that the trade should be left open to anyone who may wish to participate in the trade. In other words the Bank is advocating that coasting trade should be left to free competition rather than the present situation of State guided monopoly in the shipping enterprise.

The legal basis for the regulation of the coastal shipping is provided in the Merchant Shipping (Coasting Trade) Act 1977. Section 215 of this Act allows the minister to grant licences for ships to engage in the coasting trade, subject to any conditions he may think fit. The Minister also determines the duration of the licences having regard to :-

- (a) the age, size and condition of the ship, and
- (b) whether or not the person seeking the grant of licence is the owner of the ship, and
- (c) the suitability of the ship for the trade.

For the purpose of the implementation of the Act, The Minister appoints what is known as the Coasting Trade Committee. This committee acts as committee of advise to the Minister, all powers however is vested in the Minister and he has the full authority therefore he can either accept the advise of the committee or reject as he sees fit.

The Coasting Trade Committee consists of :-

- (a) an officer from Marine Administration who shall be the chairman.
- (b) two members to represent shippers interest or producers of goods carried in ships engaged in the coasting trade.

- (c) one member to represent consumers of goods carried in ships engaged in the coasting trade.
- (d) three members to represent the holders of the coasting trade licences.

Therefore, from the composition of the above committee it is apparent that nearly all parties with direct interest in the carriage of the coasting trade is represented therefore one can also assume that all matters affecting the coasting trade has been dealt with in the interest of all parties concern, but off course at times it does not due to the fact that the Minister has the final say, and sometimes the Minister has taken decisions contrary to the advise of the committee.

Another area of weakness of the Coasting Trade Committee lies in the fact that although the members drawn from the industry are expected to represent the interest of all licence holders, they can not be other than interested parties. For this reason they may loose the support of the other members of the industry who might in any case feel that a direct access to the Minister and his advisers (i.e- Maritime Administration) would be more effective.

Under such circumstances it can be said that the Maritime Administration does have alot of influence on the coastal shipping, not only in areas of its direct responsibility that is ship safety but also in areas of policy.

The economic case of a regulated system lies in the contention that in its absence the route, would either be overtonnaged and

destructively competitive or alternatively monopolistic regulation aims to prevent these abuses first by controlling the capacity allowed to operate on the route and second by controlling rates.

However, there is a problem which is to ensure that the industry protected by licencing is genuinely efficient. It is not easy to regulate for all matters, indeed if attempt were made, the whole system would become bogged down in an impossible bureaucracy.

It should not be part of any regulatory system, for existing licence holders to have their permits to trade suddenly withdrawn from them for reasons other than those relating to safety or legality of the operation (7).

These then are some of the main elements in the choice concerning the regulatory system, which is not perfect but obviously can be reformed if the government and industry could establish an effective long term strategy, and an alternative. Such is not an easy task or choice and it is tempting to suggest that the industry should continue to be regulated with the government encouraging the development of the mainport strategy.

- CHAPTER V -

LEGISLATION

The PNG Merchant Shipping Act was first introduced in 1975 to regulate and control the safety aspects of the coastal shipping industry. The act was gazetted in September, 1975. Since then there has been a number of amendments and additions to the Act, so that it, now consists

of the following parts :-

- Part 1 -- Preliminary
- Part 2 -- National Character and Flag
- Part 3 -- Registration of Ships
- Part 4 -- Safety
- Part 5 -- Crewmen
- Part 6 -- Navigation Aids
- Part 7 -- Pilotage
- Part 8 -- Coasting Trade

In addition the following regulations have been issued under the Act and are now in force :-

- Merchant Shipping (Registration) Regulation 1975.
- Merchant Shipping (Safety) Regulation 1976.
- Merchant Shipping (Crewmen) Regulation 1976.
- Merchant Shipping (Pilotage) Regulation 1976.
- Merchant Shipping (Nav aids) Regulation 1976.
- Merchant Shipping (Committee of advice) Regulation 1977.

Also the Merchant shipping (Coasting Trade) Regulation is now in force. This regulation sets fees and the format of coasting trade licences and permits (8).

A committee of advice to the Minister on the views of the cross-section of the industry, they include :-

- (a) Navigational Aids advisory committee-on all matters affecting aids to navigation.
- (b) Committee of advice on crew accommodation- on all matters affecting crew accommodation.

- (c) Coasting Trade Committee - on all matters affecting the coasting trade industry, especially ship licencing and setting of freight rates.

The administration considers that the present parts of the Act together with proposed legislation on the limitation and division of a shipowners liability and Marine Pollution, are sufficient for the regulation of the safety and operational aspects of the Papua New Guinea fleet. The various parts of the Act are now being consolidated with re-arrangement of sections.

Further legislation presently under consideration concerns overseas trade, sea carriage of passengers, stevadoring, new harbours board legislation and legislation concerning fishing vessels. Papua New Guinea do realize that the Fishing Industry will be a growth area and that new legislation will be required for the regulation of the safety of these vessels. It is however expected that due to the nature of its activities it can be expected that the legislation will not have to be as strict as it would for normal commercial vessels of an equivalent size.

Finally unlike many developing countries PNG Maritime Legislation is very much up-to-date having only been enacted in 1974, but off course it does not mean to say that there is no room for improvement.

- CHAPTER VI -

ROLE OF MARITIME ADMINISTRATION IN TRAINING

The Government through its Maritime administration (i.e Marine Division

of Transport) has been actively emphasising training of seafarers for its coastal fleet. Training for foreign certificates of competency has not been given any attention at all. This need will only be realized when the coastal vessels has been fully and adequately manned by the citizens. Since independence ten years ago the Governments priority was to train seafarers for its coastal fleet in order to localize the manning situation which by then was virtually manned by expatriates especially in the officer grades, however to-day the situation has changed drastically with the majority of the coastal fleet being fully manned by PNG citizens.

However training of seafarers is not a direct responsibility of the Maritime Administration. This responsibility has been entrusted to The Nautical Institute Board which was instituted through an Act of Parliament referred to as The Nautical Institute Act of 1976.

When Papua New Guinea achieved Independence in 1975, very little statistical data was available concerning the PNG coastal fleet for planning purposes. On the basis of the information available at the time, the Nautical Institute was established in Madang, one of Papua New Guinea's three largest ports.

The objective of the Nautical Training Act is two fold :-

- (a) to provide courses of training and other instructional facilities for theoretical and practical training of persons in Maritime skills and

- (b) any other objectives incidental or ancillary to the objects in (a).

In order to achieve the above objectives the Nautical Institute Board performs the following specific task.

- (a) to provide general or special courses of training in Nautical studies (Engineering or Deck).
- (b) to provide or co-operate in the provision of lectures and study groups.
- (c) to arrange conferences and seminars.
- (d) to arrange facilities for training and study.
- (e) to provide residential and other accommodation facilities for students and other participants in the activities of the Institute.

The Board of Governors of the Nautical Institute Board is appointed under the Nautical Training Institute Act by the Minister for Transport. The Board comprises of representatives from shipowners, operators and representatives of Government Departments notably from Education, Labour and Transport Department representative is an officer of the Maritime Administration (9).

The Board is basically a management body whose major task is to ensure that the Institute is operating effectively and efficiently as required and that the courses are offered according to statutory requirements.

The Board does not have any statutory powers to decide the syllabi and or to issue certificates of competency. This is the role of the

Maritime Administration apart from its representation on the Nautical Institute Board.

However because the Maritime Administration is the main advisory body to the Minister for Transport on all shipping stems from the more fact that the Maritime Administration sets the syllabus and examines and issues certificates of competency, which once again undoubtedly influences training.

In order to have an effective liason between the administration and the college the Maritime Administration had in the past designated a section within its organisation known as the Nautical Education section. This section was established in 1979, and the officers in this section of the administration were responsible for the liason with the Nautical Institute apart from its statutory tasks.

Since Independence, Papua New Guinea has become a powerful voice in the South Pacific Forum and has been a leader in the South Pacific Maritime Affairs, especially in the discussions of the Uniform Maritime Standard set in the South Pacific Region. The standard set in the South Pacific Region, is comparable with the 1978 STCW Convention, it is therefore hoped that this new standards for the region will come into force in the near future. Similarly at the International level the IMO Convention on STCW is now awaiting ratification by PNG Government.

It is my hope that PNG will sooner or later come to realize that the STCW Convention is in the best interest of PNG, for the following

reasons :-

- (a) availability of assistance, by other member states, in the fields covered by the convention.
- (b) potential recognition on a global scale of qualifications issued by PNG Administration, eg, potential employment of seafarers on foreign Flag ships.
- (c) by requiring minimum acceptable standards for qualifications of seafarers, the convention ~~offer~~ a positive step towards enhancing safety of life on the high seas and PNG waters.

- CHAPTER VII -

PROBLEMS OF MARITIME ADMINISTRATION

In the preceding chapters I have attempted to describe in very broad terms the organisation and the activities of the Department of Transport and Civil Aviation, in particular the Maritime Administration, I intend now to return to the major task of this paper, that is the problems of Maritime Administration in PNG.

The problems of administration expressed in this chapter is mainly from the writers own experience having personally served in the administration in various capacities ranging from projects and planning officer to Acting Director of the administration. The problems discribed here are not theoretical but real and some of it has existed ever since the administration was instituted in 1974, when the PNG Merchant Shipping Act was enacted in Parliament.

As mentioned earlier the Act itself presents no difficulties although

many times the PNG coastal shipowners complained that the standards set by the regulations are unnecessarily too high. The problem exists at the level of implementation and execution of the Act and Government shipping policies which is problematic.

The following are detail description if some of the major problem areas but before doing so, I would like to make reference to Capt, Vanchiswars presentation in his paper titled Establishment/ Administration of Maritime Affairs in Developing Countries. In my opinion he presented a very good summary on some common problems of Maritime Administration in developing countries. The summary of problems presented by Capt.Vanchiswars is quoted as follows :-

1. Inadequate awareness of the basic problems themselves.
2. Non-involvement in the evolution of international standards and consequential problem of having to deal with them in isolation.
3. Outdated Maritime Legislation.
4. Inadequate infrastructure as regards organisation and personnel for ensuring:-
 - (a) proper stand. of maritime safety on board ships.
 - (b) Maritime Development in General.
 - (c) attention to allied matters.
5. Acute shortage of marine officers with the needed qualifications and experience.
6. Lack of training facilities for marine officers and seaman.

Captain Vanchiswars further states that the problems mentioned have continued to exist because :-

- (a) there has been the need to identify the problems themselves and,

- (b) there has been the vital need to provide guidelines proposals and suggestions and information on the many activities and to attend to in order to overcome the problems and to lead to appropriate Maritime Administration/ Development (11).

I shall now try to discuss in some depth, some of the major problems as experienced in PNG, some of which are unique in the sense that the country has only been self-governing for the last 10 years, therefore the problems experienced by PNG may not necessarily be the same with other developing maritime nations. However in spite of being young in nationhood, PNG is truly a maritime nation with hundreds of islands, large as well as small and a vast coastline with some 16 ports of call for international shipping. These ports are very much scattered throughout the country making the task of the Maritime Administration more difficult and complex.

7.1 Resources

A major problem which faces PNG Administration to-date is that of availability of resources. The problems related to lack of resources is not unique to PNG but rather a world wide problem but felt more, so by the developing nations, who suffer from severe lack of financial, human and technical resources. Lack of financial resources has meant a burden on the PNG taxpayer regardless of whether fees are being charged for issue of statutory certificates.

The present size of the PNG survey force has been rather limited compared to the large geographical coverage of the country in which

16 major ports are scattered. A further area of weakness is the PNG Administrations ability to meet its international obligations being parties to International Convention. At the present PNG Maritime Administration is only able to meet its obligation as a Flag State but cannot fulfil its obligations as a Port State. The lack of Port State Control is attributable to the lack of monetary resources and personnel. At this time PNG Administrations major concern is to ensure that ships registered under its flag meets the minimum requirements of the IMO convention.

However, it must be recognised that no government no matter how well developed it maybe has an administration extensive enough to perform all its obligations under the conventions and it is a question of judgement, as to which of this obligations can be undertaken by the administration according to its own capabilities, PNG Administration as mentioned earlier has chosen to concentrate its limited resources on exercissing Flaf State control.

7.2 Availability of Marine Surveys

Any Maritime Administration, in order to effectively carryout its duties in terms of safety administration requires to be furnished with appropriately qualified and experienced marine surveyors in the Nautical, Marine Engineering and Naval architecture disciplines. The mainfields of activities which upsorbs considerable manpower will be that of dischanging responsibilities under International convention.

One of the biggest problems that has remained with the Administration since its inception has been lack of marine surveyors.

PNG itself has not up now got seafarers with qualifications as Master Mariners, First Class engineers or naval architects. The highest seafaring certificates held by PNG citizens is coastal Master and engineer 4th class. Under such circumstances PNG has continued to rely heavily on foreign expertise.

As mentioned earlier the recruitment and retention of appropriately qualified and experienced marine surveyors continues to be a drain on the scarce monetary resources.

PNG has entered into Merchant Shipping through the establishment of PNG Shipping Corporation. However inspite of esablishment of the National Line, there has been no serious attempts made by the Line or the Government in terms of training of its seafarers. The Line has continued to be manned by foreign personnel. Until such time PNG realises that it cannot continue to rely on foreign expertise which is rather costly, it will continue to engage people from abroad at all cost. Further problem area has been lack of continuity of marine surveyors. It has been experienced that the marine officers once recruited from UK has used PNG as a stepping store for further search for a more secure job in Australia. It has become a common practice that after a period of three years, these marine surveyors either find themselves a job in Australia and moves on or get an offer of a job from the private sectors in PNG with better salaries and conditions than that offered by the Government.

There is no easy solution to the above problems, therefore the only solution lies in ensuring that PNG citizens are trained for the highest seafaring careers inorder that in the long term future, the country

will be able to obtain its own marine surveyors.

The source of recruitment for marine surveyors has been limited to UK mainly due to our long established relation through our colonial history, and more importantly from the fact that there has been an over supply of people in UK of seafarers with certificates of competencies in Marine Engineering and Nautical disciplines.

The difficulties of lack of qualified personnel in most developing countries has been recognised by the International Maritime Organization (IMO) through the efforts Mr Srivastava, who has been instrumental in establishing the World Maritime University, in order to begin the process of training personnel from developing countries, to meet these needs.

In this regard PNG has not been able to fully utilize this institution in the disciplines of training of marine surveyors. PNG has been unable to send people to this course, from the mere fact that there is no national marine officers, as yet available in the country.

7.3 Obligations Under the Conventions

A contracting Governments obligations under the convention system are two fold :-

- (a) as a Port State ensuring that foreign ships visiting its ports are safe to proceed to sea.
- (b) as Flag State ensuring that its ships meet the standards of the conventions and that it carries out certain other duties in respect of safety manning and investigates casualties to its ships and reports to the

Organisation accordingly.

It has been a difficult task for the PNG Administration in terms of allocation of available resources between the above two major responsibilities. The longer and more vulnerable the coast line and the greater the number of ship visits, the longer the proportion of surveyors employed on port state control. As mentioned earlier PNG has not been able to carry out its responsibilities in terms of port state control.

Even in the absence of Port State control, the other obligation relating to (Flag State control has not been) adequately taken care of at this stage of the country's development. The more ships are registered in the country the more surveyors are needed to ensure safety of shipping. Some countries with relatively short, coastlines have large Merchant fleet and the proportion of resources employed on flag state duties will be greater.

The problem that still remains is for the Administration to decide how to fulfil the external obligations for both flag and port state activities without excessive cost and perhaps limited number of surveyors.

7.4 Cost of Surveys

Charging policies for surveys vary widely amongst Maritime Administrations. At one end of the spectrum are countries (eg. France and Denmark) which make no charge on their own shipowners, or on foreign shipowners for performance of statutory.

In these cases the taxpayer has to meet the cost. On the otherhand countries such as UK, charge shipowners for the full cost the statutory surveys.

Like UK, PNG charge survey fees on a scale based on the ships sizes ; and under these scheme the smaller ships are inevitably subsidised by the fees charge for the survey of larger vessels because, for example the surveyors travelling time is similar in each case and the work entailed in the surveys does not necessarily vary directly with the size of the ship.

Whilst shipowners welcome and accept the charge for surveys the fees still remain a problem and opportunities for reduction are limited.

7.5 Enforcement of Regulations

The last but not the least of problems relates to the enforce of the regulations. It is often said that it is not worth introducing regulations if it cannot be enforced. PNG Administration suffers from lack of appropriately qualified personnel in the field of Maritime Law therefore many questions relating to legality of certain actions by the shipping community has been left unchallenged.

Any cases relating to the infringement of the shipping regulations are left to the police department to carryout necessary presection. The prosecution in this case often fails since the shipowners are able to hire highly qualified Marine Lawyers where as the ordinary police officer with little, or no knowlege of the shipping regulations and the shipping enviroment is at a loss.

7.6 Conclusion

The problems of resources formed the opening theme of this chapter and has influenced all sections of this paper. It therefore seems appropriate that I should conclude on this same topic. Obviously there is an upper limit to the proportion of resources which can be devoted to safety. As this proportion increases the law of diminishing returns has an increasing influence and, even with the support of the most benevolent government and generous public, absolute safety cannot be achieved. There is therefore a limit to the cost, the shipowner and / or public maybe reasonably be expected to bear and a defensible position has to be established. Similarly there is a limit to the regulatory process as, particularly following a major casualty. There is a public and political pressure for more regulations in the hope that they will prevent another disaster. As a consequence, ships and their equipment become more expensive to operate and their very complication puts additional burdens on the crews, This in turn lead to longer training courses and futher costs.

It would seem that most effective way of increasing safety is to devote more available resources to crew education and training. The problem here is the long period of time required to train personnel and it will be some years before the results of the IMO standards of training and certification (STCW) become apparent.

Regulations can be changed and ships built to new requirements much more rapidly than a single cadet can be educated and trained as a officer.

Undoubtedly the standards and altitudes of crews have the greatest single influence on ship safety. Structure and equipment regulations can be enforced at the time of a survey but operational techniques and responsible behavior cannot effectively enforced when ships are in service. Recognition of this problem has led to the requirement for ships safety committees and appointment of safety officers. Acceptance of this new approach by ships personnel together with support from the shipping companies will have a greater effect on the overall shipping environment.

- CHAPTER VIII -

CONCLUSION AND RECOMMENDATIONS

In the first instance, I must say that inspite of the fact that, PNG like many developing countries suffers from lack of resources from the point of view of financial, personnel and technical resources, it has been able to maintain its obligations in maintaining a reasonable standard of safety for shipping. It is believed that the present organisational structure has been sufficient in the light of the countrys overall policy framework. The resources allocated has been sufficient considering the countrys limited financial resources which must be allocated to all sector of Governments development programme.

In this regard it must be worth mentioning that PNG has tried to avoid being dictated to by international conventions or instruments.

The most important area for improvement must be in the field of training of seafarers for international certificates. In the past emphasis has been placed on training of sea going personnel for the requirements of the coastal trade. Whilst this has been beneficial for the coastal shipping, in the sense that coastal shipowners are now able to employ national officers to man their vessels where as in the past they had no choice but to employ expatriates at tremendous costs. To-day the bulk of the coastal fleet is manned by citizens which is a great deal of saving for the industry in terms of salaries, (which otherwise would have been) paid out to the expatriates.

The Maritime Administration however, still continues to rely heavily on the foreign personnel to carry out its duties of ship surveys. In this regard the cost to the government has been rather high.

However in spite of the high cost of surveyors employed from abroad the Maritime Administration continues to play an important role in the development of Papua New Guinea. Just as the shipping industry is vital to the nation, so the Maritime Administration is vital to the standards of safety and overall efficiency of the shipping industry.

Even though PNG at present is doing what it can in maintenance of safety standards and encouraging the efficiency of the shipping industry, there are areas in which it needs to place additional emphasis in order to improve its present status.

The following suggestion, is therefore offered for the consideration by the administration.

8.1 Maritime Officer Training

As mentioned earlier PNG has continued to rely very heavily on expensive personnel for the task of carrying out ship surveys. In the past PNG has concentrated its efforts in training of seafarers for the manning of its coastal fleet, which until 5 years ago was manned by officers from abroad.

Since the establishment of the Nautical school in 1975, training of seafarers has made great progress, and the result of such training has seen the coastal fleet now fully manned by the citizens.

It is therefore important that the administration should now begin to change its training policies from coastal orientation towards international certificates of competency. At the moment PNG has neither the manpower nor the resources to upgrade its Nautical Institute, to offer courses for foreign going certificates.

This means that PNG must look elsewhere for training of its citizens for the International Certificates. One such possibility strongly recommended is to make necessary agreement with Fiji's Marine school where selected PNG citizens can begin their training, it must be kept in mind that training of personnel to achieve highest international certificates takes a long time and the efforts must be made now. Such training will require co-operation from both industry and the Government particularly from the National Line which should be urged to begin as soon as possible a cadetship programme.

The Government should also start putting pressure on foreign lines which has been calling at PNG, or participating in the carriage of PNG trade to start making some necessary arrangements on some kind of cadetship programme.

The other possibility open to PNG is to redirect some of its Australian Aid to training at the Australian Maritime College. Such options are available but all PNG needs to do is to discuss with the Governments concerned i.e. Australia and Fiji in order that some kind of understanding can be formulated so that PNG citizens will be able to start training for the higher certificates.

8.2 Participation in IMO Meetings

PNG is party to many of IMO conventions and so it is of great importance for PNG to participate in the evolution of IMO standards as much as reasonably possible, at least once a year in the Maritime Safety Committee sessions especially when the sessions agenda contains relevant matters with possible implications to PNG shipping interest. Some of the benefits of attending the IMO meetings would be :-

- (a) To make known PNG's views on the limitations on various issues being discussed.
- (b) To ensure that the needs of PNG as regards technical assistance will be made known and recognised by the developed countries, thus leading to better understanding and co-operation.
- (c) Additional knowledge and experience will be gained through making personnel contacts, discussions and consultation

during sessions, both formal and informal.

Off course it is noted that it will be expensive in terms of travel expenses. However there are other ways of avoiding, or at least minimizing travel expense if such trip is organised in such a way that the national line participates in the meetings as part of the country delegation, where some costs can be shared.

Another way to minimize travel expenses would be to operate through a regional organisation such as the South Pacific Economic Co-operation (SPECO) in which the small Island countries in order to minimize cost nominate one country to represent and speak on behalf the group in this way cost could be minimised.

8.3 Retification of Relevant International Instruments.

Trade and shipping are usually affected, if national maritime law of a country is not in accordance with international maritime law. Thus, there is no doubt of the need for recognition of international instruments.

With respect to the labour conditions, IMO convention 147 is of importance and attention is drawn particularly to Article 5 which makes reference to several IMO conventions.

The international instruments against substandard ships can be summarized as follows :-

- (a) The IMO convention 147, "The merchant shipping (minimum standards) convention, 1976". The importance of the

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convention lies in the fact that it encompasses all ships no matter whether they fly the flag of a state party to the convention or non-party in respect of combating the phenomenon of substandard ships as the right of contracting parties, embodied in Article 4 to inspect all foreign ships calling at their ports and take all measures necessary to eliminate any deficiency aboard posing a clear hazard to safety or health (11).

- (b) IMO conventions which have been drafted in 1970s, entitling port states to inspect ships flying the flag of non-contracting state and to take measures necessary to ensure that such ships will not pose hazard to safety.

It will not be beneficial not to ratify the conventions because even if a state is not party to an international convention, it really has not much option left but to comply with the convention regulations so that it become acceptable to members of the Maritime Community with whom the non-convention state has got to trade with mostly for economic reasons.

A list of IMC convention already ratified by PNG is provided in (Annex VI).

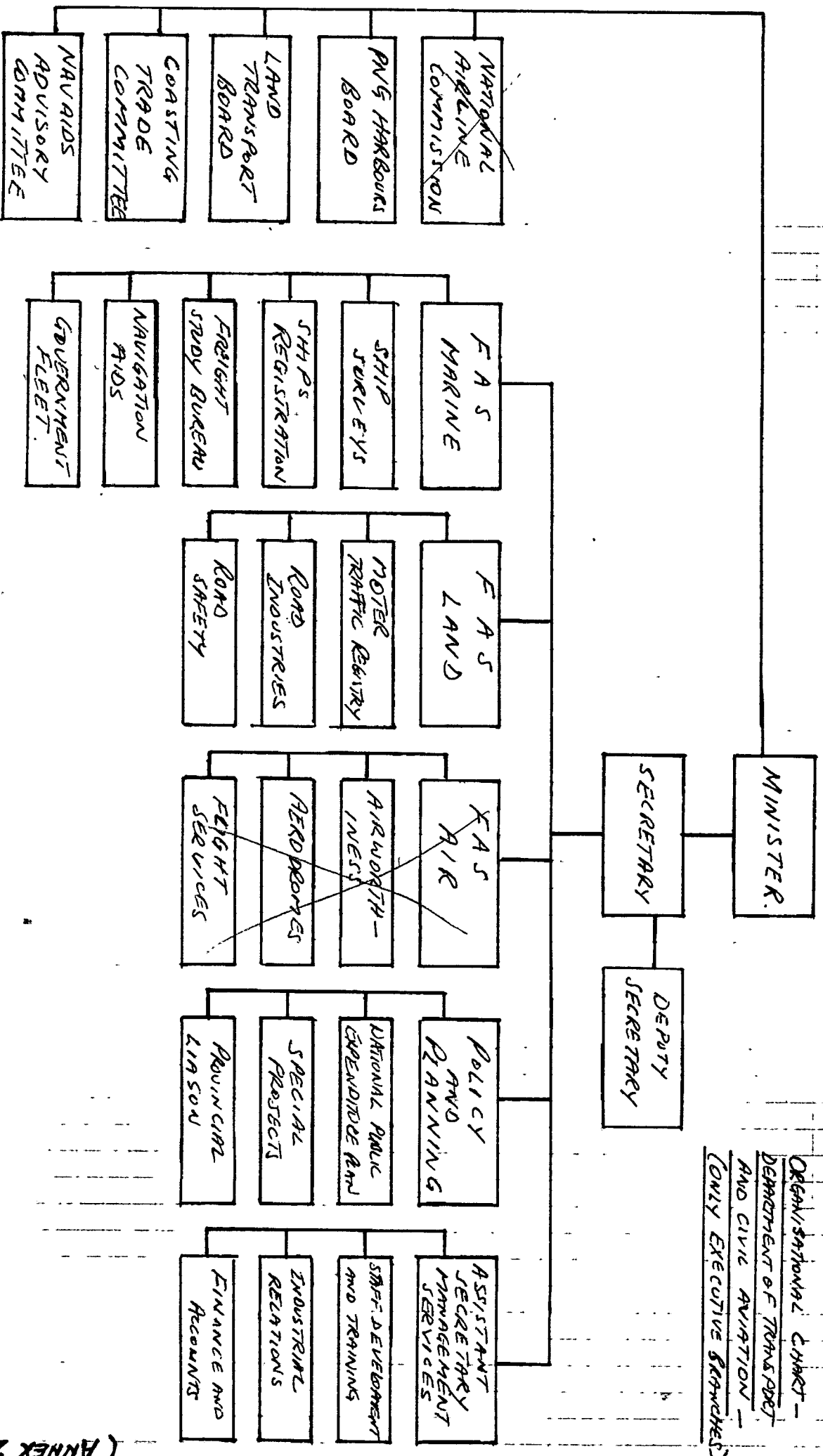
8.4 National Legislation.

Even though PNG Maritime Legislation is rather new, only been adopted in 1975, there has been many changes in the shipping scene, both domestically and internationally. On the domestic scene, there has been a large increase in tonnage registered in PNG, with more modern vessels, which are being manned and operated by citizens, where as

up until 5 years ago, these vessels would have otherwise been manned by foreigners. The ownership structure is changing and there has been increases in cargo traffic etc. On the international level, there has been new international conventions being adopted, eg. the new Law Of The Seas Regime and the United Nations Code Of Conduct For Liner Conferences just to mention a few. All these changes soes have a bearing on the national legislation, therefore it is important that the national legislation is being constantly reviewed and up-dated when necessary.

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- (7) The Economics And Regulation Of Coastal Shipping In PNG, Sydney Gilman. University Of Liverpool, April, 1983.
- (8) The PNG Merchant Shipping Act, 1975.
- (9) PNG Maritime Training And Manning Study, T. Norris & T. Harris, September, 1980.
- (10) Establishment / Administration Of Maritime Affairs In Developing Countries, Vol. 1, Captain P.S.Vanchiswar. Malmo, 1984.
- (11) IMO CONVENTION 147, Lecture Handout, By Professor Åss, WMU.



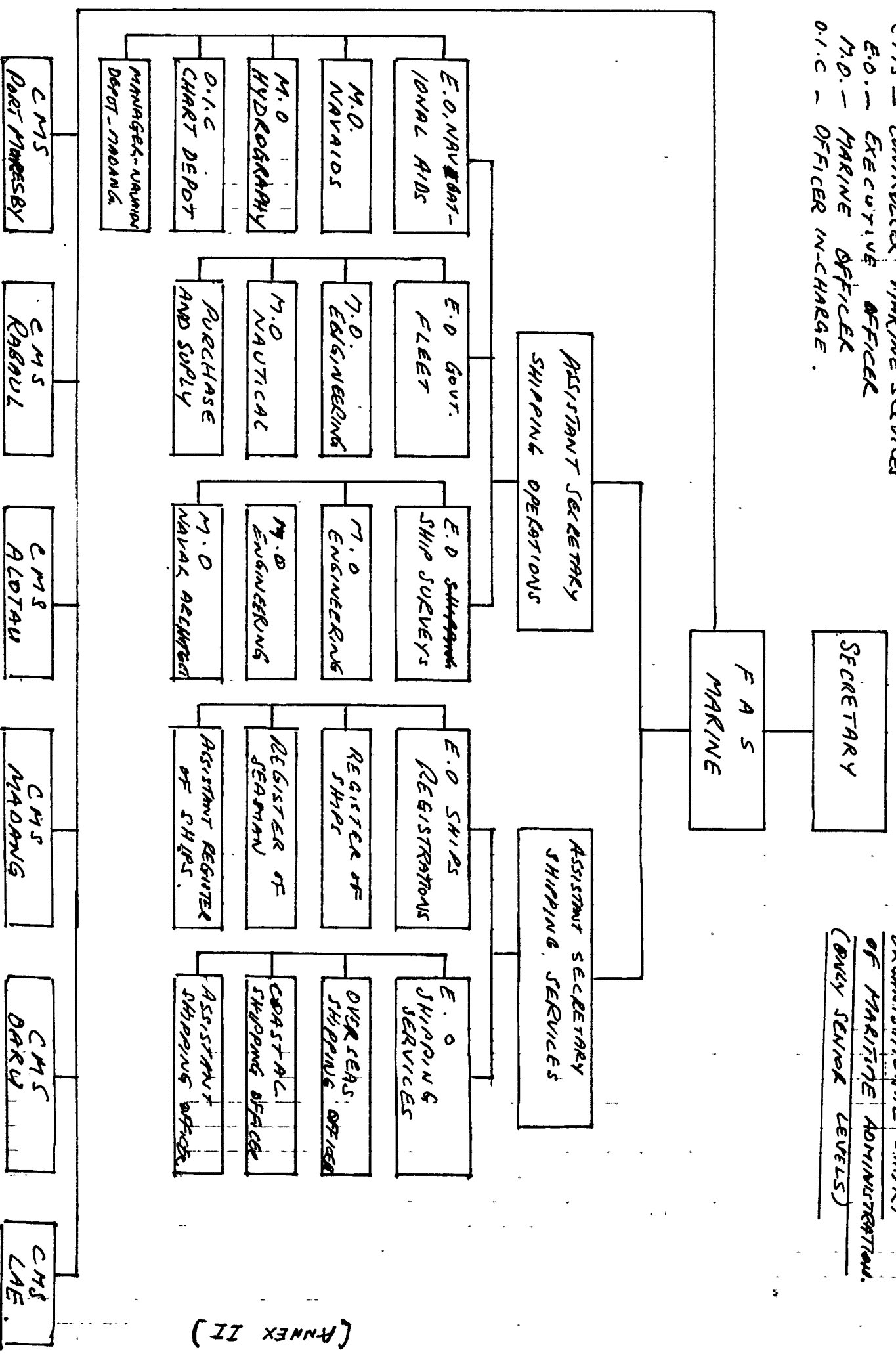
ORGANISATIONAL CHART -
 DEPARTMENT OF TRANSPORT
 AND CIVIL AVIATION -
 (ONLY EXECUTIVE BRANCHES)

FAS - FIRST ASSISTANT SECRETARY.

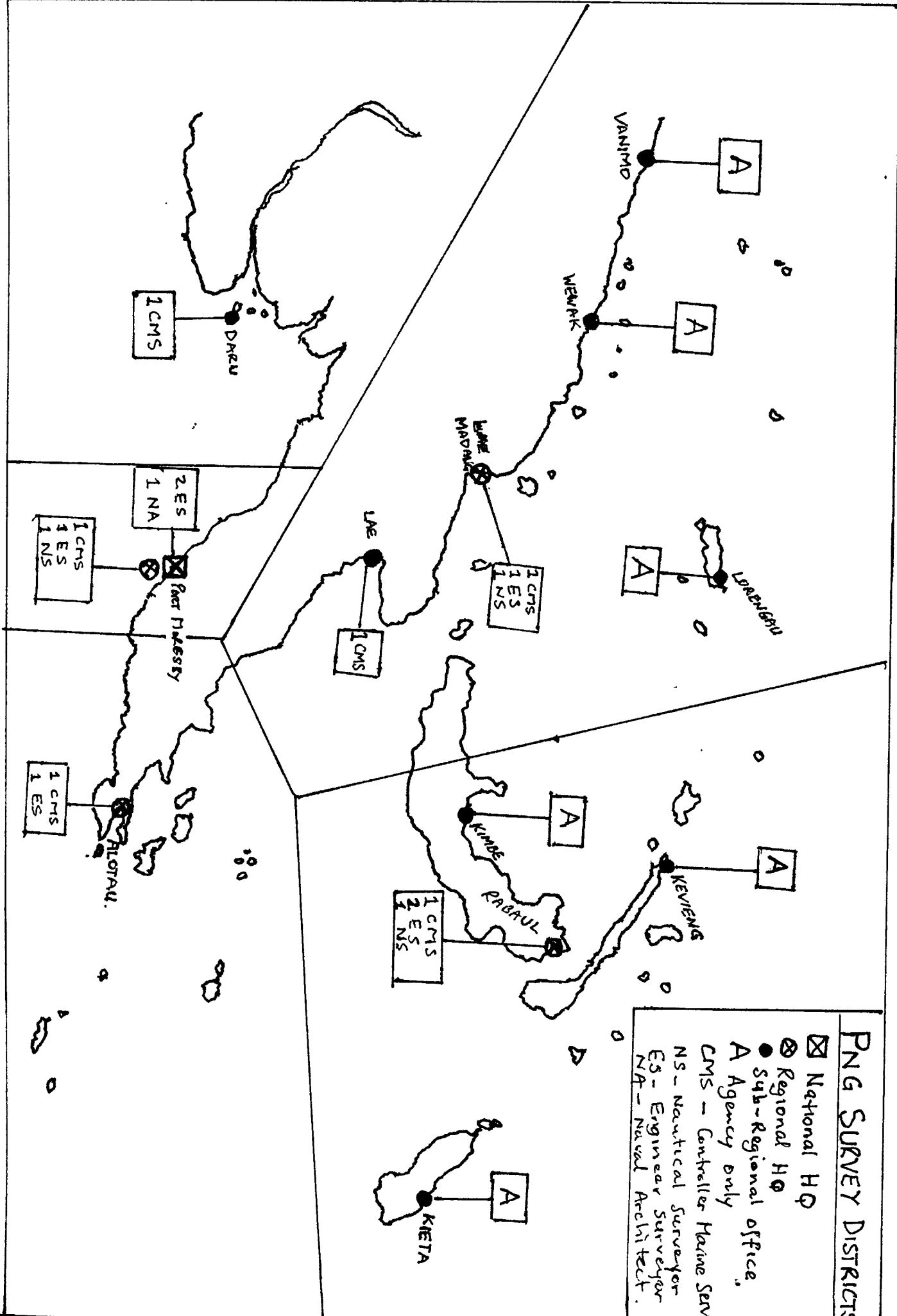
(ANNEX I)

FAS - FIRST ASSISTANT SECRETARY
 C.M.S. - CONTROLLER MARINE SERVICES
 E.O. - EXECUTIVE OFFICER
 M.O. - MARINE OFFICER
 O.I.C. - OFFICER IN-CHARGE

ORGANISATIONAL CHART
OF MARITIME ADMINISTRATION.
(BY SENIOR LEVELS)

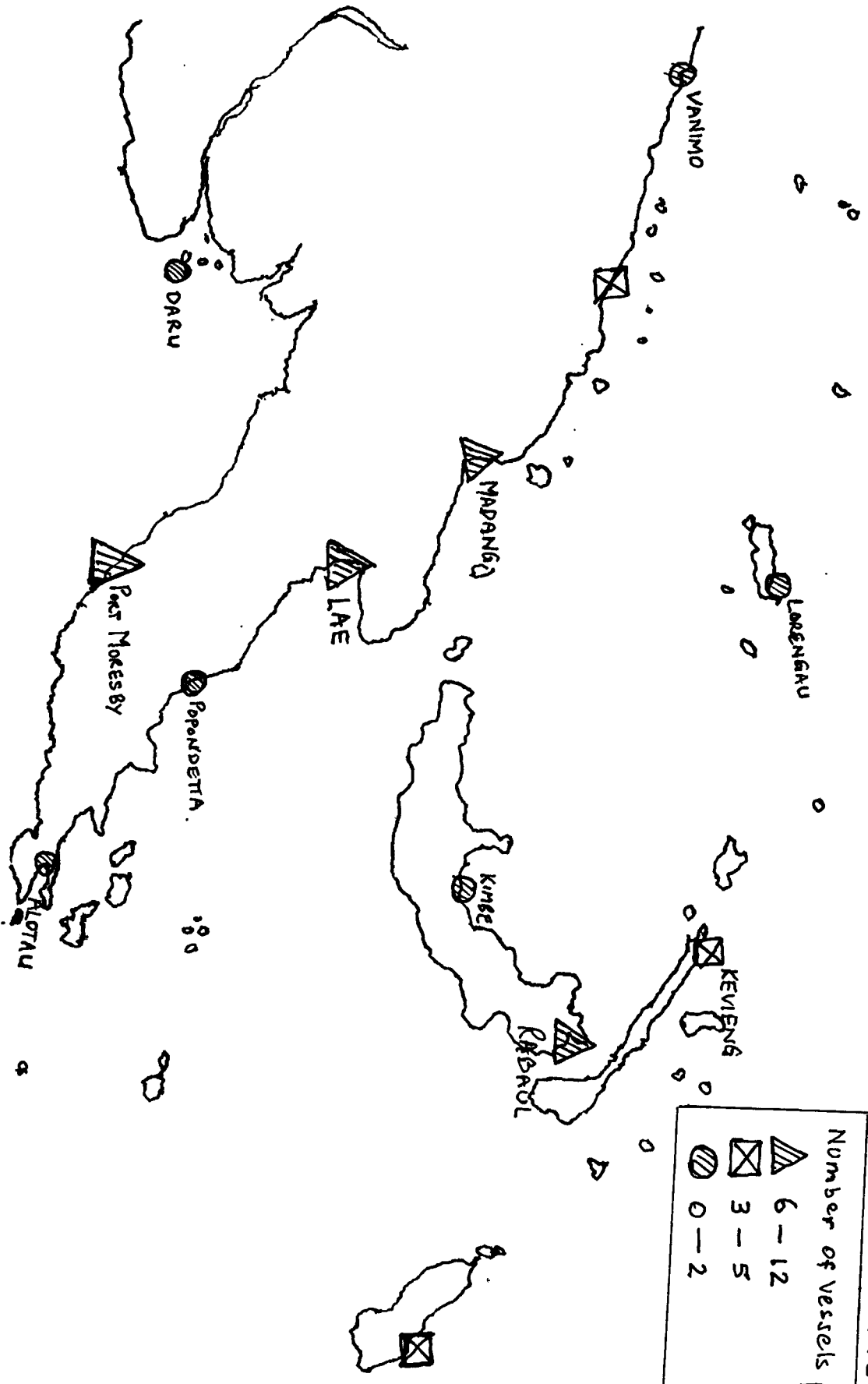


(ANNEX II)



PNG SURVEY DISTRICTS

- ☒ National HQ
- ⊗ Regional HQ
- Sub-Regional office,
- A Agency only
- CMS - Controller Marine Services
- NS - Nautical Surveyor
- ES - Engineer Surveyor
- NA - Naval Architect.

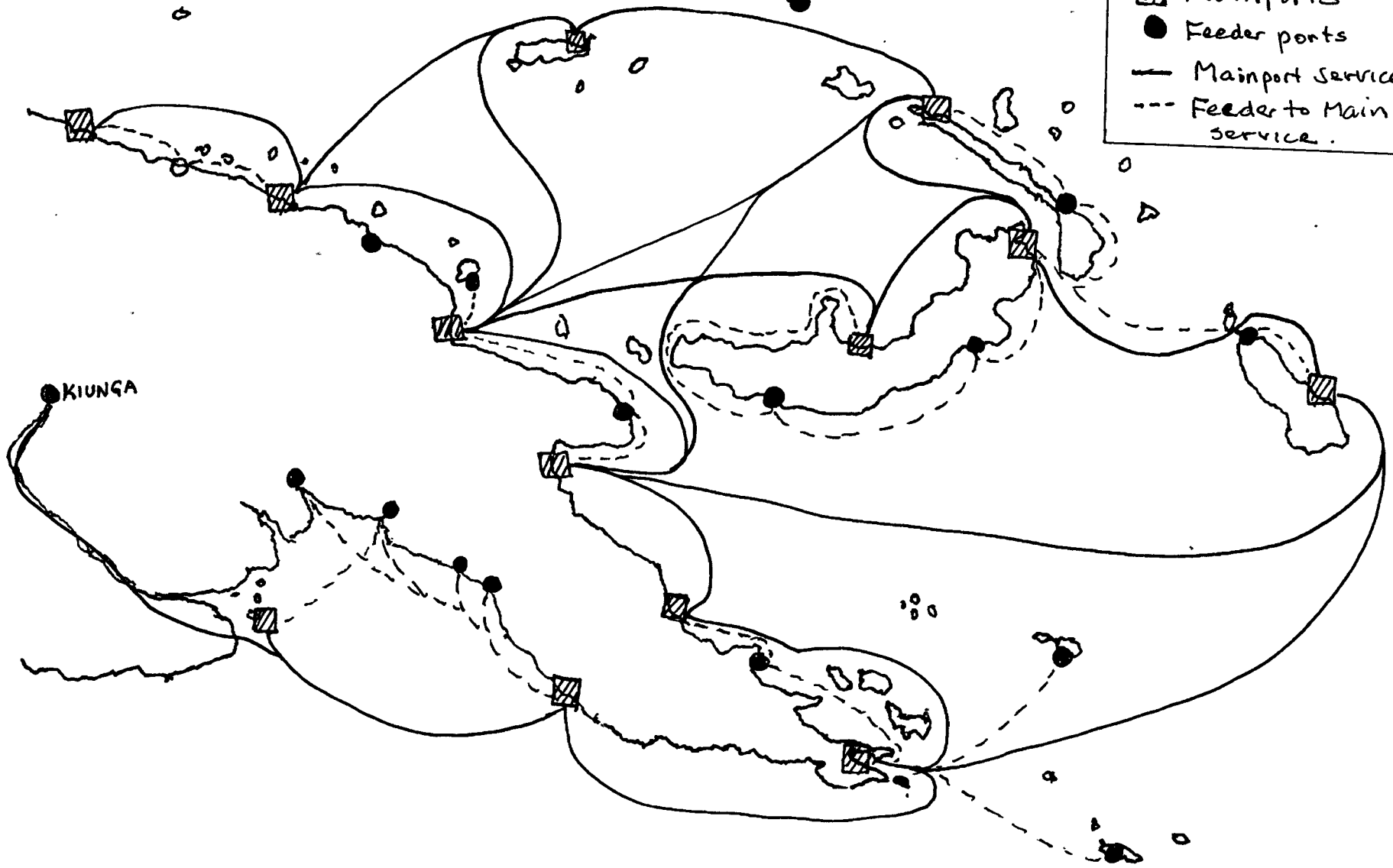


PNG'S PORTS OF CALL FOR OVERSEAS SHIPS	
Number of vessels per week	
△	6-12
◻	3-5
○	0-2

(ANNEX IV)

PNG'S MAJOR COASTAL SHIPPING ROUTES

- ▨ Mainports
- Feeder ports
- Mainport service
- - - Feeder to Main port service.



(ANNEX II)

LIST OF IMO CONVENTIONS RATIFIED

BY PAPUA NEW GUINEA

1. IMO CONVENTION OF 1948 .

For the purpose of the creation of the International Maritime Organisation, membership to IMO is attained through acceptance : of this convention.

2. INTERNATIONAL CONVENTION FOR PREVENTION OF POLLUTION OF THE SEA BY OIL 1954.

This convention aims at the protection of marine environment.

3. INTERNATIONAL CONVENTION RELATING TO INTERVENTION ON THE HIGH SEAS IN CASE OF OIL POLLUTION CASUALTIES 1969.

4. INTERNATIONAL CONVENTION ON THE ESTABLISHMENT OF AN INTERNATIONAL FUND ON COMPENSATION FOR OIL POLLUTION DAMAGE 1971.

Under this convention it provides for PNG to contribute to fund in case of oil pollution damage.

5. INTERNATIONAL CONVENTION FOR SAFETY OF LIFE AT SEA, (SOLAS 1974)

This convention sets out rigid safety requirements for the international shipping community must conform to facilitate optimum safety at sea.

6. CONVENTION ON THE INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA 1972.

This convention inter alia sets out guidelines in respect navigation for the avoidance of collisions at sea by vessels.

7. INTERNATIONAL CONVENTION ON LOAD LINES 1966.

This convention provides for vessels to be loaded in conformity to the strict requirements thus to ensure sufficient stability.

8. INTERNATIONAL CONVENTION FOR INTERNATIONAL MARITIME TRAFFIC 1965

This convention sets out guidelines for seafarers on international movement of maritime traffic.

9. INTERNATIONAL CONVENTION ON PREVENTION OF MARINE POLLUTION BY DUMPING OF WASTES AND OTHER MATTERS 1972.

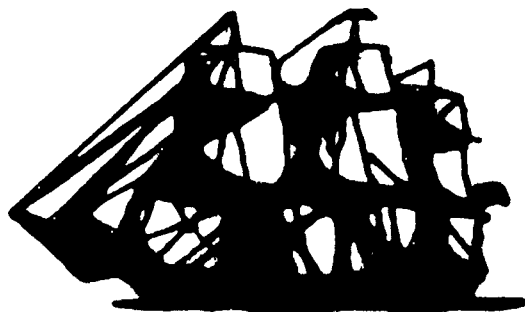
10. IMO CONVENTION AMENDMENT 1979.

(ANNEX VII)



NATIONAL OIL POLLUTION PLAN

PAPUA NEW GUINEA



MARITIME DIVISION

SEPTEMBER 1981

CHAPTER 1:

DEFINITIONS

ADVANCE OPERATIONS CENTRE - a location in close proximity to pollution incident from which an ON SCENE COORDINATOR directs pollution combat operations.

AUST. COASTAL SURVEILLANCE CENTRE - (ACSC) - the operations centre established in Canberra and manned continuously for the conduct of Marine operations.

AUTHORITY (in the event of an oil spill will be) - The PNG Government and its Departments, PNG Harbours Board, Oil Industry and Bougainville Copper Limited.

COMBAT AUTHORITY - The Authority responsible for the combat of a pollution incident.

DISPERSAL EQUIPMENT - Equipment designed to combat spilled oil by the application of dispersant.

MARINE POLLUTION SECTION - that section of the PNG Department of Transport and Civil Aviation responsible for matters relating to pollution of the sea by ships.

MOSAP (Marine Oil Spills Action Plan) - is the Oil Industries Oil Spills Response Plan and is so designed that it is intergrated when necessary with the National Plan.

NATIONAL PLAN - The combined efforts of the PNG Government, PNG Harbours Board, Oil Industry and Bougainville Copper Ltd to provide a contingency plan to combat ship sourced oil spills in the PNG Marine enviroment.

OIL INDUSTRY - The oil companies SHELL, MOBIL and BP working in conjunction with the oil industry MOSAP.

ON SCENE COORDINATOR (OSC) - The person appointed by an Authority to take direct charge of operations to combat a pollution incident.

OPERATIONS COORDINATOR - Officer of the (Marine Division) Department of Transport and Civil Aviation Port Moresby responsible for the overall coord. of the National Plan.

POLLUTION INCIDENT - An actual, potential or suspected oil discharge.

PORT MANAGER - is the officer of the PNG Harbours Board who has responsibility for the activities within the declared Port Limits.

PRIME RESPONSIBILITY - is the responsibility held by the Authority having powers in the area in which the incident occurs.

SENIOR AREA CONTROLLER - the officer in Airways Operations Branch of the CAA who is responsible for arranging aircraft charters and aircraft operation.

TANKER DISCHARGE OFFICER - the officer employed by the Oil Industry who is fully trained to oversee the discharge of tankers.

CHAPTER 2

DIVISION OF RESPONSIBILITY

- 2.1 Combat Authority - is defined as the Authority responsible for the combat of a pollution incident.
- 2.2 Prime Responsibility - is the responsibility held by the Authority having powers in the area in which the incident occurs.
- 2.2.1 This Authority may assume the function of combat authority or may request another authority to act as combat authority on its behalf. (e.g. Port Manager requests Oil Industry and/or Marine Division, Department of Transport and Civil Aviation to act as combat authority).
- 2.2.2 This Authority concept has been implemented as follows:-
- (1) Within the PNG Harbours Board declared ports limits. The Port Manager of the PNG Harbours Board. Please NOTE 2.2.1.
 - (2) Within the Bougainville Copper Limited Port of Anewa Bay. The B.C.L. Marine Superintendent.
 - (3) Outside of the above areas Marine Division, Department of Transport and Civil Aviation.
- 2.2.3 Where the area affected by a pollution incident involves more than one Authority having prime responsibility then the Authority having prime responsibility then the Authority first being informed of the incident may assume the role of combat authority until such time as the combat decision is made by the Authorities concerned.
- 2.2.4 It is emphasised that the Authority having first been informed of a pollution incident shall pass all relevant information to combat authority without delay.
- 2.2.5 The Marine Division has overall responsibility to ensure that any cleanup is conducted in a satisfactory manner.

CHAPTER 3

POLLUTION INCIDENT COMBAT ORGANISATION - PLANNING

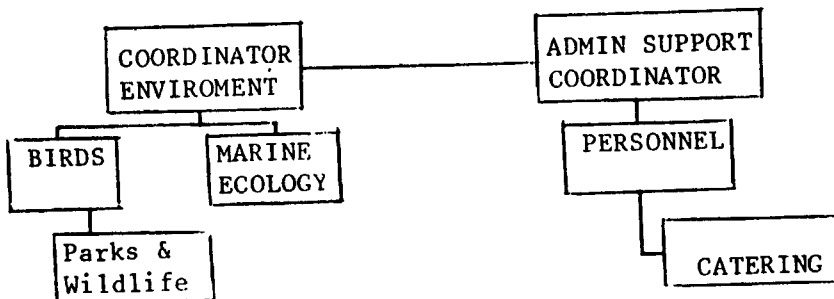
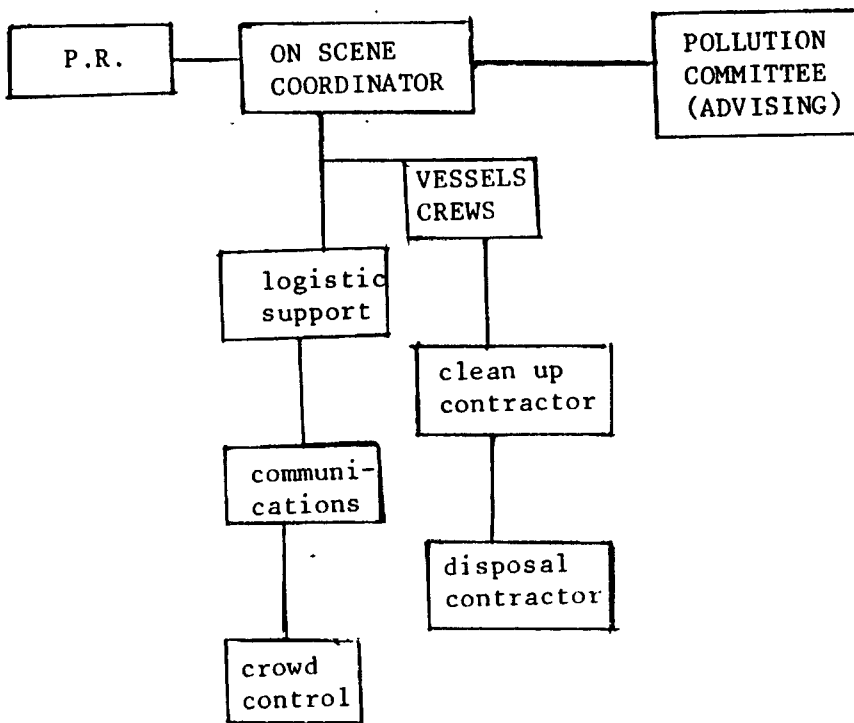
3.1 POLLUTION COMMITTEE is primarily responsible for the period revision of the contingency plan as and when it sees fit and should comprise of the following delegates from Marine Division Department of Transport.- PNG Harbours Board, Oil Industry, BCL Ltd and RPNGC, and Office of Enviroment and Conservation.

3.1.1 It is suggested that the core membership of the POLLUTION COMMITTEE comprise representative of the PNG Government, PNG Harbours Board, Oil Industry and Bougainville Copper Limited. Office of Enviroment and Conservation and RPNGC.

3.2 An Authority may attain assistance in preparing instructions or advice for an On Scene Coordinator by consultation with the POLLUTION COMMITTEE and their advisors. Technical advice may also be obtained from the Operations Pollution Section, Canberra.

3.2.1 Authorities shall ensure the availability of adequate staff to support an On Scene Coordinator.

3.2.2 TYPICAL FIELD ORGANISATION



3 3.3 Defence Force Assistance: Requests for military transport offshore

CHAPTER 3 (cont'd)

or surveillance to be directed to the MARINE POLLUTION SECTION PORT MORESBY, who will liaise with the PNGDF for assistance. In the event of a maritime casualty which will or may cause pollution the Minister may request the PNGDF to intervene under the power invested in him by Section 17 of Prevention of the Pollution of the sea act 1979.

TRAINING OF PERSONNEL

- 3.4.1 The Marine Pollution Section (Marine Division))Department of Transport and Civil Aviation, Port Moresby is responsible for the Organisation and administration of training courses to further the functions of the National Plan. These courses are broadly designed to cover the following areas:
- (a) Techniques and Equipment Operation to On Scene Coördinators, operators, and crews of boats and other available staff.
 - (b) Administration, duties and responsibilities to the On Scene Coordinators to OSCs.
- 3.4.2 To maintain the level of training interest it is envisaged that when possible the POLLUTION COMMITTEE will organise short training sessions at Centres where dispersal equipment is located.

CHAPTER 4

POLLUTION COMBAT ORGANISATION

OPERATION

4.1 INCIDENT REPORTS

4.1.1 Initial reports of incidents can come from a wide variety of sources and be directed to many recipients. It is important that the information received be reported without delay to the combat authority enabling immediate action to be taken.

4.1.2 The DOT Marine Division, Search and Rescue and Pollution Section is manned MONDAY - FRIDAY 0745 - 1600. However, staff are always available outside these hours. Police Headquarters BOROKO 255555 will contact these staff outside office hours and the POLLUTION CENTRE would be activated.

D.O.T. HQ. SEARCH AND RESCUE & POLLUTION - TELEX NE22203
TELEPHONE 214994

211866 Ext. 317

HQ. POLICE BOROKO - TELEPHONE 255555

4.1.3 When a report has been channelled to the appropriate combat authority, that authority should first, if considered necessary, confirm the presence of oil.

4.1.4 MARINE POLLUTION REPORTS

Contents of Message - Before communicating please attempt to collect the following information:

DATE TIME GROUP: Date and time message sent (eg. Dec. 12th 9.30pm reads 122130).

FROM: Identity of unit reporting (name, address, telex number, or other contacts available).

TO: DOTRAN NE22203 (telex) POLLUTION. (BH only)
214994 (telephone BH)

MESSAGE TYPE: POLLUTION REPORT

- A. Nature and extent of pollution and type of oil if known.
- B. Position (LATITUDE AND LONGITUDE) of pollution.
- C. Source of pollution if known.

CHAPTER 4 (cont'd)

- D. Estimated course and speed of any craft involved.
- E. Point of discharge from vessel
- F. Weather and sea conditions.
- G. General appearance and condition of sea surface in vicinity
- H. Whether sample taken and if so position relative to polluting vessel.
- I. Identify and position of vessels in close proximity if pollution source unknown.
- J. Any other relevant information (eg. enviromental sensitivity)
- K. Photographs taken YES/NO
- L. Destination and ETA of reporting unit

4.2 COMMUNICATIONS

- 4.2.1 The Operation Coordinator will assign operating frequencies in the VHF; HF; SSB frequency spectrum for the duration of the incident.
- 4.2.2 In a pollution incident, in addition to the communications facilities available through PORT MORESBY AND RABAU COAST RADIO STATIONS, it is envisaged that extensive use will be made of the following:

Telephone System, Telex, Port & Mobile VHF Stations
Police, Oil Industry, Defence, Mission and Private Radio
Networks.

4.3 CHARTER AND USE OF AIRCRAFT

- 4.3.1 Requests for aircraft services shall be directed to Senior Area Controller (SAC) through OPERATIONS COORDINATOR D.O.T. MARINE.
- 4.3.2 The task to be performed by the aircraft shall be clearly specified to the SAC POM by the OPERATIONS COORDINATOR, POM or his delegate (who is also responsible for expanding or reducing the area involved as required).
- 4.3.4 The area shall be specified using latitude and longitude to designate terminal points.
- 4.3.5 The most suitable available aircraft shall be determined by the SAC POM.
- 4.3.6 Pilot briefing and debriefing will be undertaken by SAC POM or delegate who will forward the results to the OPERATIONS COORDINATOR, POM.

4.4. AVAILABILITY OF VESSELS FOR COMBAT OPERATIONS

- 4.4.1 Details of craft availability, including Government Fleet, statutory bodies vessels, and private craft are shown in appendices.

CHAPTER 4 (cont'd)

4.5 CHARTER OF VESSELS FOR COMBAT OPERATIONS

4.5.1 If necessary suitable vessels may be chartered, whilst an On Scene Coordinator may need to vary the operation of a vessel to suit prevailing conditions and the particular circumstances of the incident, he shall make it clear to the Master that the NAVIGATION AND SAFETY OF THE VESSEL WILL REMAIN THE RESPONSIBILITY OF THE VESSELS MASTER AT ALL TIMES.

4.6 SAFETY AT THE SPILL SCENE

4.6.1 The On Scene Coordinator should be aware that at all times the safety of the public and combat team should supersede all other considerations. The operation & limitations of available equipment and craft should be kept in mind throughout all phases of combat.

4.6.2 On Scene Coordinators and their response team employed in the operation should be made aware of the following hazards: "

- (1) Fresh crude oil and other petroleum products are capable of giving off flammable gases. Where flammable gases are expected the OSC is strongly advised to seek advice from the oil industry prior to taking any combat action.
 - (a) the use of cooking appliances; internal combustion engines; cigarette smoking; the use of non flame proof electrical equipment.
 - (b) concentrations of flammable gases entering the air intakes of diesel engines causing the machinery to race.
 - (c) flammable gases may be detected by the use of an explosimeter Anewa Bay, Lae, Madang, Port Moresby, Rabaul available from oil Industry bulk plants.

4.6.3 Particular sea-going hazards.

- (1) Overloading of small craft with supplies of dispersant and associated equipment and inadequate lashings.
- (11) Spillages of dispersant and oil can cause slippery deck conditions - have a deck hose connected.
- (111) Wind may cause dispersant to be blown across working areas - goggles should be provided.

4.7 STOCKPILE STORES

4.7.1 The release of stockpile stores will be through the PORT MANAGER responsible for such equipment.

4.7.2 List of locality and stockpile etc are contained in appendices.

4.8 EQUIPMENT OPERATING PROCEDURES

4.8.1 The National Plan equipment rigged according to laid down procedures provides the most effective application and agitating system. Its correct use is strongly recommended.

CHAPTER 4 (cont'd)

4.8.2. Dispersant/Oil Ratios: the ratios could vary between 1.10 and 1:1 depending on many variables. If dispersal is not achieved using the latter rate no useful purpose would be achieved by continuing to spray. The dispersant will have little effect on weathered crude that has emulsified on the sea surface. Oil of the chocolate mousse type may also be very difficult to disperse.

4.9 CLEAN UP METHOD

- 4.9.1 OSC shall be aware of the appropriate clean up method through training and reference material. OSCs are reminded that with small spills of light products i.e. motor spirit, kerosene and distillates the best action may well be to leave the spill to dissipate naturally, or agitate by propellor wash or fire hoses. Specialist assistance should be sought from the Fire Services in the event that the spillage threatens public safety or shoreline properties.
- 4.9.2 Whilst the use of dispersants is one method of cleaning up an oil spill, there are certain areas where the use of chemical agents could cause mortality to marine life and shoreline species. Such areas are reefs, mangrove swamps and areas of shallow water and limited water exchange. Containment by the use of floating booms and recovery by a skimmer is preferable in such cases.
- 4.9.3 If oil does penetrate into mangroves it should be flushed to seaward by using high pressure water jets.
- 4.9.4 The assistance of the petroleum industry should be sought to dispose of any recovered oil. It is envisaged that petroleum trucks could be used to receive oil from the skimming operations and transport to the nearest bulk storage depot.
- 4.9.5 Heavily oiled beaches should be cleaned using graders with care taken to remove the minimum quantity of beach material. If large quantities of beach material are removed they should be replaced by clean material to minimise the risk of erosion. Steel bodied dump trucks should be utilised to transport oil materials to the disposal site. Lightly oiled beaches should be cleaned by manual labour crews using shovels, forks and heavy gauge plastic bags.
- 4.9.6 Oiled material and oily debris should be disposed of at land-fill sites as directed by the Office of Environment & Conservation. The usual method is to spread the debris over the garbage, cover with an earth layer and repeat the process.

CHAPTER 5

SPECIALIST ASSISTANCE AND TECHNICAL INFORMATION

5.1 SPECIALIST ASSISTANCE

- 5.1.1 The PNG Department of Transport (Marine Division) and Civil Aviation Agency can assist with advice on clean up methods.

COMMUNICATIONS

(D.O.T. Marine Division)- Phone 214994

(C.A.A. Duty SAR Coordinator)-Phone 256885

Offshore currents

drift calculations

- 5.1.2 The Office of Environment and Conservation, the Department of Primary Industry (Fishery Division) can assist with advice on: Marine Ecology etc. Dispersant usage and shoreline cleanup and disposal of oily wastes.

Marine Ecology and danger to wildlife

Office of Environment and Conversation - Phone: 271917 B.H.
260279 A.H.
256418 A.H.

D.P.I. Fisheries Division - Dr. JOHN MUNRO - PHONE: 214522

Port Moresby Meteorological Office - PHONE: 255544

- 5.1.3 The Oil Industry will provide information and any required assistance through the Regional Industry Controller of the MOSAP PLAN. (Operations Manager Shell PNG Pty Ltd) - PHONE: 228700 B.H.
214632 A.H.

CHAPTER 6

STOCKPILE DEPOTS - PLANNING

- 6.1 Stockpile Depots are located as per attached Appendices.
- 6.1.2 The Papua New Guinea Harbours Board provides and is responsible for the storage, replenishment and maintenance of dispersant BP 1100 WD at the designated locations except that Bougainville Copper Limited will undertake that responsibility at ANEWA BAY.
- 6.1.3 At the completion of an operation the On Scene Coordinator shall advise the OPERATIONS COORDINATOR of amount of stockpile requiring replenishment and/or repair and total cleanup cost. The Operations Coordinator will take the necessary administrative action to recover these costs.

CHAPTER 7

STOCKFEED DEPOTS - STORES AND MAINTENANCE PROCEDURES

7.1 RETRRN OF STORES

- 7.1.1 On receipt of returned stores, the On Scene Coordinator shall check the quantity of dispersant used and any equipment loses or damage and inform the OPERATIONS COORDINATOR, PORT MORESBY.
- 7.1.2 The On Scene Coordinator or his delegated representative will ensure that all equipment is cleaned and serviced prior to being stored.
- 7.1.3 Empty dispersant drums shall be retained at stockpile depots for eventual sale.

7.2 MAINTENANCE PROCEDURES FOR DISPERSAL EQUIPMENT

- 7.2.1 Responsibility for maintenance of the dispersant equipment lies with section providing storage.
- 7.2.2 The maintenance procedures as promulgated in the operating instructions will be carried out at monthly intervals. (The first working day of every month) for the inshore and offshore pumps.
- 7.2.3 After use in the field.
 - 1. Open up pump casing and ensure that filters are clean.
 - 2. Assemble pump unit hoses and spray booms and pump fresh water through the system for at least ten minutes. Hose all salt water off the equipment.
 - 3. Disconnect system, drain water, coil and tie hoses and make fast to pump frame.
 - 4. Drain engine oil from pump, flush through and refill with ~~new~~ oil. Clean air filter.
 - 5. Check all nuts, bolts and fittings for tightness.
 - 6. Spray moving parts with water inhibitor WD 40, or similar brand.
 - 7. Check contents of tackle boxes, ensuring that all shackles, pins and other small items of gear are not missing. Check that booms and stanchions are in good condition and nozzles are not damaged.

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NATIONAL PLAN OIL POLLUTION

Harbours Board Stock of BP 1100 WD Concentrate

The BP 1100 WD Concentrate was purchased by the Harbours Board at a cost of K43,000 and is contained in 200 litre drums.

The Board will maintain and replace drums as and when necessary.

<u>Location</u>	<u>Number of Drums</u>
LAE	90
PORT MORESBY	10
ALOTAU	10
MADANG	10
RABAU	10
KIETA	10

The stocks are stored in the Port Area for each port.
and in addition B.C.L. stock 28 drums at Anewa Bay. (Lolofo)

HARBOURS BOARD PILOT LAUNCHES

Pilot Launches are based at ports as follows:-

PORT MORESBY

Davara

Timber Construction - LOA 16.69m

Gross Tons 45.64

Nett Tons 26.32

Power - Twin Screw Gardner 61.x Marine Diesels

Maximum Speed 11 Knots

Crew manning scale - four

V.H.F. - "Tait" Transceiver Channels 16, 12, 8

Not fitted with Radar or Echo Sounder

Crew manning scale - four

Torpiilot

Fibre Glass Construction - LOA 9 85M

Power - Single Screw Perkins Diesel

- Maximum Speed 10 Knots

V.H.F. - "Tait" Transceiver Channel 16, 12, 8

Not fitted with Radar or Echo Sounder

Crew manning scale - three

LAE

Muasa

Fibre Glass Construction - LOA

Power - Single Screw Sabre 180 Marine Diesel

Maximum Speed 9.25 knots

LOA 9.38

Crew manning scale - three

V.H.F. - "Sailor" Transceiver Model RT 144B

Channels 16, 12, 8, 6

RABAU

Teanake - same as "Muasa"

HARBOURS BOARD PILOT LAUNCHES (CONTD..)

MADANG

Karak - same as "Muasa

KIETA

Boroko

Steel Construction - LOA 13.26

Power - - Twin Screw Lees Marine Diesels
Maximum Speed 9 knots
Crew manning scale - four

V.H.F. - Phillip MFG Co. Ltd
Channels 16, 12, 8, 6.

NOTES:

Karak, Muasa, Teanake have a spare tank built in adjacent to transome and can be used for storage of oil dispersant. There are new launches built in Bougainville.

It is Harbours Board Police to maintain all pilot launches in survey with the Department of Transport and Civil Aviation.

RADIO EQUIPMENT MAINTAINED BY P.N.G. HARBOURS BOARD

Port Moresby

Location - Pilot in Charge Office

1 Base Station
2 Handsets
Channels - 16, 12, 8

Lae

Location - Port Office

1 Base Station
3 Handsets
Channels - 16, 12, 8, 6

Rabaul

Location - Port Office

1 Base Station
3 Handsets
Channels - 16, 12, 8, 6

Madang

Location - Port Office

1 Base Station
3 Handsets
Channels - 16, 12, 8, 6

Kieta

Location - Port Office

1 Base Station
2 Handsets
Channels - 16, 12, 8, 6

Wewak

2 Handsets
Channel - 16, 12, 8, 6

Future radio ship to shore communication are proposed for Oro Bay, Kavieng and Kimbe.

The Harbours Board does not maintain equipment in Alotau, Samarai, Raka, Vanimo, Aitape and Lorengau.

NATIONAL PLAN OIL POLLUTION

P.N.G. HARBOURS BOARD TELEPHONE NUMBERS

PORT AND LOCATION	NUMBER
PORT MORESBY - HEAD OFFICE	211627 211400 211569 211724
General Manager - House	214910
Secretary - House	253864
Chief Engineer - House	212316
Senior Works Officer - House	256006
Engineering Consultant - House	214749
Supt of Pilotage - House	253635
Telex Number (Official Port Moresby Head Office)	TLX.22243 Harbour NE 22243
PORT MORESBY - PORT	
Port Manager - Office	211637
" " - House	212895
Pilot Launch Accommodation	214516
As Asst. Port Manager - House	212307
Security Control	214886
Pilot - Office	211265
Pilot - House	211265
SAMARAI	
Port Manager - Office	621346
Port Manager - House	621351
ORO BAY	
Port Moresby - Office	621346
" " - House	621351
ALOTAU	
Port Manager - House	611276

PNG HARBOURS BOARD TELEPHONE NUMBERS (CONTD..)

PORT AND LOCATION	NUMBER
DARU	
Port Manager - Office	659025
Port Manager - House	659144
LAE	
Port Manager - Office	421831
- Office	422477
- House	422820
Asst. Port Manager - House	422761
Pilot - Office	422540
Pilot - House	421795
Teléx Number (Official) Rabaul - Port Office	TLX.92918 Harbour NE 92918
KIETA	
Port Manager - Office	956066
Port Manager - Office	956063
Port Manager - House	956370
Pilot - Office	956063
Pilot - House	956308
KIMBE	
Port Manager - Office	935134
Port Manager - House	935164

PNG HARBOURS BOARD TELEPHONE NUMBERS (CONTD..)

PORT AND LOCATION	NUMBER
KAVIENG	
Port Manager - Office	942182
Port Manager - House	942098
BUKA	
Port Manager - Office	966017
MADANG	
Port Manager - Office	822351
Port Manager - Office	822352
Port Manager - House	822731
Private Pilot - House	822781
WEWAK	
Port Manager - Office	862298
Port Manager - House	862580
LORENGAU	
Port Manager - Office	409078
Port Manager - House	409140
VANIMO	
Port Manager - Office	871024
Port Manager - House	871008

PNG NATIONAL OIL POLLUTION PLAN

OIL INDUSTRY AVAILABLE ASSISTANCE AND CONTACT LISTING

In Papua New Guinea the Oil Industry is -

- Shell Papua New Guinea Pty Ltd - "Shell"
- Mobil Oil New Guinea Limited - "Mobil"
- BP (Papua New Guinea) Pty Ltd - "BP"

The Oil Industry is able to offer advice and assistance to combat a pollution incident under the Oil Industry Marine Action Plan (MOSAP).

Under MOSAP a Local Industry Controller (LIC) has been appointed for each port in Papua New Guinea where possible. A Regional Industry Controller (RIC) has been appointed for the entire industry in PNG. The LIC is able to co-ordinate the response of the Industry within a port and the RIC will co-ordinate industry assistance for larger incidents.

The LIC's and RIC have access to technical information. If necessary the RIC can quickly obtain information from specialist advisors overseas.

At larger ports the Oil Industry can provide the following assistance:-

- (a) Oil Pollution 'first-aid' trailer. (includes brooms, shovels, sprays, detergents, etc.)
- (b) Small stocks of detergents
- (c) UHF intrinsically safe two-way radios
- (d) Explosimeter, (for testing flammable vapour)
- (f) Safety equipment
- (g) Staff trained in petroleum handling

These ports are marked '*' in the following contact list.
Smaller ports will only be able to offer limited assistance.

OIL INDUSTRY - CONTACT LISTING

	PORT AND CONTACT	BUSINESS HRS		AFT HRS	
		PHONE	TLX	PHONE	2ND CALL
	<u>Head Offices</u>				
Shell	Operations Manager (POM) LIC	228700	NE22244	214632	251610
Mobil	Operations Manager (Lae)	421888	NF42592	421018	422725
BP	Operations Manager (Lae)	422200	NE22200	421651	421440
	<u>*ANEWA BAY & LOLOHO</u>				
Shell	Installation Manager LIC	951931	-	951174	951348
Mobil	Agent	951022	-	-	-
	<u>ALOTAU</u>				
BP	Agent	611318	-	611193	-
	<u>KAVIENG</u>				
Shell	Depot Superintendent LIC	942052	-	942080	-
Mobil	Agent	942185	-	-	-
BP	Agent	942190	-	-	-
	<u>KIETA</u> (No Oil Industry, closest Anewa Bay)	-	-	-	-
	<u>KIMBE</u>				
Shell	Agent LIC	935229	-	-	-
BP	Agent	935290	-	-	-
	<u>*LAE</u>				
BP	Installation Manager LIC	422200	-	421440	421651
Mobil	Terminal Superintendent	421238	-	422725	421018
Shell	Installation Manager	424543	NE44151	423117	423580
	<u>LORENGAU</u>				
Shell	Agent LIC	409088	-	-	-
Mobil	Agent	409159	-	-	-
	<u>*MADANG</u>				
Mobil	Terminal Superintendent LIC	822616	-	822490	822462
Shell	Installation Manager	822948	-	822517	822606
BP	Agent	822625	-	-	-
	<u>ORO BAY</u>				
Shell	Agent	297095	-	-	-
Mobil	Agent	297050	-	-	-
	<u>*PORT MORESBY</u>				
BP	Installation Manager LIC	214400	-	254370	421651
Shell	Installation Manager	212636	-	211858	253627
Mobil	Terminal Superintendent	211871	-	254586	421018
	<u>*RABAU</u>				
Mobil	Terminal Superintendent LIC	921210	-	922915	922927
Shell	Installation Manager	921424	-	921798	921547
BP	Agent	921788	-	-	-
	<u>SAMARAI</u>				
Shell	Agent	621255	-	-	-

OIL INDUSTRY - CONTACT LISTING (CONTD..)

		PORT AND CONTACT	BUSINESS HRS		AFTER HRS	
			PHONE	TLX	PHONE ¹	2ND CALL
	Mobil	Agent	621238	-	-	-
		<u>VANIMO</u>				
	Mobil	Agent	871105	-	-	-
		<u>WEWAK</u>				
	Mobil	Depot Superintendent	LIC 862075	-	862074	-
	Shell	Depot Superintendent	862518	-	862142	-
	RP	Agent	862419	-	-	-

MARINE AREAS OF CONSERVATION INTEREST

The coastal waters of Papua New Guinea and its many islands and reefs support an abundant, and diverse array of marine life. The extent to which this marine life would be affected by an oil spill would depend on many factors including the quantity and characteristics of the released oil, and the varying susceptibility of marine organisms.

As PNG capabilities develop to respond to oil spills there will be an increasing requirement to provide specific advice on the biological sensitivities of marine areas and recommendations on the use of dispersants and clean-up procedures. As an initial step the following list of marine areas of conservation interest (see map) has been compiled from existing information. While the list should not be considered all inclusive, it can assist in identifying sites of particular interest which would be susceptible to oil pollution. It is anticipated that more detailed maps will be prepared as additional information is accumulated.

MAP REFERENCE	AREA IDENTIFICATION	FEATURES	REFERENCE
1.	Maza Wildlife	Declared management area for dugong and other marine resource management and conservation.	(1)
2.	Balimo-Fly River	Variety of wetland, swamp woodland, and mangrove habitats	(ii)
3.	Turama-Kerema	Major mangrove system which serves as nursery and feeding grounds for juvenile prawns and as habitat for mangrove crabs (species forming the basis of commercial and subsistence fishing in the Gulf of Papua); abundant aquatic birdlife.	(ii) & (iii)
4.	Port Moresby	Rich coral reefs and marine life; lobster fishery at Yule Island; recreational use of shoreline; proposed marine park at Bootless Bay.	(ii) & (iv)

MARINE AREAS OF CONSERVATION INTEREST (CONTD..)

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|-----|-------------------|---|--------------------|
| 5. | Abau | Potential sanctuary and wildlife management area for dugong and other marine resource management and conservation. | (i) |
| 6. | Samarai | Rich coral reefs and marine life pearl farming | (v) |
| 7. | Louisiade | Unusually varied coral formations and marine life; possible and wildlife management area for dugong and other marine resources management and conservation. | (i) & (ii) |
| 8. | Woodlark | Possible wildlife management area for dugong and other marine resources management and conservation. | (i) |
| 9. | Trobriand | Possible sanctuary and wildlife management area for dugong and other marine resources management and conservation; feeding grounds and nesting area for marine turtles. | (i) & (vii) |
| 10. | Fly Island | Potential site for marine park | (iv) |
| 11. | Labu Lakes | Mangrove vegetation; subsistence fishery; potential site for provincial park | (iv) & (vi) |
| 12. | Huon | Raised coral reef; possible wildlife management area for dugong and other marine resources management and conservation. | (i) & (ii) |
| 1e. | Long-Karkar-Manam | Wildlife sanctuary and management area or Long Island (one of the main breeding areas for the green turtle). | (i) & (vii) |
| 14. | Murik Lakes | Mangrove vegetation; shoreline fishing villages. | (ii) |
| 15. | Vanimo | Raised coral coast; nesting of marine turtles | (ii) & (vii) |
| 16, | Manus Island | Coral reefs; possible wildlife management area for dugong and other marine resource management and conservation; important breeding area for marine turtles (particularly Sabben Islands, Los Reyes Islands, Purdy Islands, Johnson Island and Hermit Islands). | (i) & (iv) & (vii) |

MARINE AREAS OF CONSERVATION INTEREST (CONTD..)

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|-----|-------------------------------|--|
| 17. | Garu Wildlife Management Area | Possible extension of wildlife management area to protect (i) & (vii) marine resources including marine turtles. |
| 18. | Talele Island | Mangrove vegetation and (iv) marine life. |

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