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**WORLD MARITIME UNIVERSITY
MALMÖ, SWEDEN**

**PROBLEMS AND PROSPECTS OF THE NATIONAL PORT AUTHORITY
WITH EMPHASIS ON THE OPERATIONAL PROCEDURES**

BY

**JEBEH PAASEWE
THE REPUBLIC OF LIBERIA**

A dissertation submitted to the World Maritime University in partial fulfillment of
the requirements for the award of the degree of

MASTER OF SCIENCE

IN

PORT MANAGEMENT

1999

DECLARATION

I certify that all the material used that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents reflects my own personal views, and are not necessarily endorsed by the University.

Signature _____

Date _____

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World Maritime University

DEDICATION

TO

THE

GLORY

OF THE

ALMIGHTY GOD

ACKNOWLEDGEMENTS

Training is an indispensable ingredient for human development. The post graduate studies at the World Maritime University (WMU) have equipped me with an in dept knowledge on port management and maritime affairs. Therefore, I would like to express my warmest thanks and appreciation to all those who in diverse ways contributed to the achievement of this academic success.

I thank the Almighty God for his bountiful blessings bestowed upon me and for His direction, wisdom knowledge and understanding.

I gratefully acknowledged the National Port Authority (NPA) for my nomination. My special gratitude goes to my sponsors for awarding me the scholarship and my sincere thanks to Dr. Shuo Ma, my supervisor and course Professor, for his constructive analytical, and valuable comments and suggestions.

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To my mother, Mrs. Tee-Tee K. PaaSewe, children, sisters and brothers my special thanks for your constant prayers and moral support. I have nothing valuable to offer them, than to solicit for God's blessings and achievement of success in all their endeavours.

I would like to express my warmest gratitude to all my love ones and friends for their valuable support and advises.

ABSTRACT

This paper outlined problems affecting the operations of the National Port Authority (NPA), and made some suggestions that could help to alleviate those problems. In addition, the main cause of low productivity of the organisation is also highlighted.

It indicates the actual cause of low productivity of the port which relates to the lack of investment and commitment of the management team as a result, has a negative effect on the operational procedures of the organisation.

It further explains the technological changes that are taken place in the maritime industry and suggests ways to cope with these changes in order to keep in line with international standard, become more productive and provide quality service to the port users.

In addition, a detailed information is given on equipment policy and conditions of application defined accordingly. The application of this policy should be given some urgency in order to improve the performance of the port.

In conclusion, emphasis are made on the importance of port in national economy and the need for improvement in order to ensure its full participation in national development.

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LIST OF ABBREVIATIONS

NPA	National Port Authority
SWOT	Strength Weaknesses Opportunities & Threats
UNCTAD	United National Conference On Trade and Development
MIC	Management Internal Control
CFS	Container Freight Station
FLT	Forklift Truck
TEU	Twenty Foot Equivalent Unit
WMU	World Maritime University
VTS	Vessel Traffic System
ETA	Estimated Time of Arrival
SDWT	Summer Dead Weight Tons
BHP	Brake Horse Power
GRT	Gross Registered Tonnage
GNP	Gross National Product

CHAPTER I

INTRODUCTION

Ports in many countries are not only transport interfaces for the transfer of goods between land and sea but as generators of economic and industrial activities.

Therefore, many ports have been developed with a view to capture a big share of the world seaborne trade traffic. For this reason, most of the ports serve not only the same region, but also the same hinterland. As a result, this opens up a broad scope to customers and potential customers for choice and ports are drawn into a immense competition in order to win the attention of these customers.

To meet these challenges and maintain efficiency, ports have to assess very carefully their strengths and weaknesses; and should be able to deal with government policies which may have a negative impact on their competitive position and should also be able to adapt to the various concepts and technological changes within the maritime industry.

However, the efficiency depends to a large extent on the political stability, national policy of the country in which it operates, the style and structure, and the level of investment of the organisation.

These styles and structures may varies from one port to another based upon their objectives. In any case, whatever their objectives are, the basic management functions are the same, and these are **planning, organising, commanding, co-ordinating, financing and controlling.**

For the last decade, the National Port Authority (NPA) has become less competitive and this situation seems to continue. The failure is due to several reasons some of which are imputed to political instability including the nine years of civil war, lack of investment, lack of trained manpower, lack of cargo handling equipment, poor operational procedures, poor management, and misappropriation of the limited funds and resources of the organisation.

In addition, one of the set backs of the NPA, is the inability of the management and the government to formulate viable national development plan and strategies.

Consequently, services provided by the port relates poorly to the needs and expectations of the port users as a result, ships have diverted their traffic as they considered the port to be expensive due to the unnecessary delays that stems from the poor services.

Another problem is the lack of transport links between the port and the hinterland which impedes the flow of cargo to and from the port.

The level of development in developing countries including Liberia, depends on their participation in world trade and it is based on the infrastructures, human resources, organisational and administrative procedures and commitment of the management team and the government as a whole.

The port industry being a vital catalyst toward national development and reconstruction, especially for a nation emerging from civil crisis and considering that seaports provide the medium through which international trade are facilitated, it is paramount that the port industry is prioritised in government national economic recovery programme. As the viability of the NPA directly relates to the economic recovery of Liberia.

In this connection, the author believes that a brief explanation of some of the most common port management structures used around the world, mainly in developed countries, would explain issues better.

CHAPTER II

2.0 PROBLEMS AFFECTING THE OPERATIONS OF THE NATIONAL PORT AUTHORITY (NPA) OF LIBERIA

2.1 Role of the Liberian Government

It has been common practice for most of the developed countries to leave the functions of some entities such as ports to either the municipalities, public or private companies to manage. Though, sometimes the phenomena could have a government support in one way or another. The situation sometimes seems to be different in most of the developing countries, where the central governments have mostly been concerned with the operations. In deed, it is a good idea for the government to be concerned with some of these functions but in a limited way.

The main role of the government should be to ensure that the internal and external policies of the country is regulated in such a way that the red tape is avoided and also to ensure stability. The government should be concerned with legislation to see that the regulatory matters are set, and make sure that the rules and regulations of the country are not violated. The country should play the role of a monitor to ensure that the performance of the port is up to international standard.

The government through the Board of Directors of the port could get involve in the national policy and planning level, because failure to properly plan and co-ordinate port system would result in either insufficient or excessive investment.

The government should not interfere into the day-to-day activities of the port should be more concern with national and international issues. The port should not be used as a government employment agency, recruitment and placement of personnel should be the sole responsibility of the organisation.

The Government should allow management to adhere to the established policy of the entity and should not ignore or go contrary to these written policies governing the National Port Authority and should allow the port to operate as a commercial entity and not a private firm.

2.2 Political issues

One of the main factors to success in port operations and investment is the country's political condition. Port users, businessmen, shipping lines, and mainly investors give this priority among all issues before making a decision whether or not to use the port or to invest. Therefore, the political stability of the country is very much essential for the attraction of investors and port users.

Instability of a country brings about political issues resulting into market uncertainties or variations surrounding the desired business outcome (revenues, costs, profit, market share, continuation of business, and so on).

For an international project or an investment to be undertaken in a country, the political stability must be maintained to the highest level if not, it may result into an economic drain effecting the foreign exchange rate, national and international policy, social and environmental issues.

The government should ensure that political stability within the country is maintained at all times. The rules and regulations should be clear and flexible in order to avoid problems.

The Act creating the National Port Authority should not be politicised, should be cleared and kept open in order to encourage potential investors who are willing to assist to develop the port.

2.3 Organisational and operational procedure

In order to increase port efficiency and foster its development, most countries have adapted the strategy of re-organising their ports and introducing modern principles of commercialisation in their organisations.

The basic concept of commercialisation is to motivate staff by decentralising managerial functions. However, such a process requires the involvement and support of all port staff, but this cannot be obtained without training, awareness campaigns and systematic staff involvement in decision-making process.

In consonance with decentralisation, there must be inevitable introduction of accountability so that heads of divisions and departments who receive managerial powers also become more accountable for their actions.

In addition, the existing organisational structure of the NPA, consists of three main bodies namely: administration, operations and finance. It has been observed by the author that the functions of these divisions are overlapping therefore it is essential that the necessary alterations be made in the organisational structure to reflect the functions of each and every division/department.

As a consequence of functions overlapping, it has become difficult to determine accountability which has resulted in to a bottleneck in the chain of command for the staff assigned to these divisions/departments.

For instance, when there is a breakdown or unavailability of equipment, the Technical Manager should be answerable to management but instead the functions of this department has been linked with that of the port manager and operations manager therefore, whenever such a case occurs, it becomes complicated as to who is responsible.

In some instances, the Technical Manager waits to receive instructions or vouchers from the office of the Port manager for the purchase of spare parts or to repair/service an equipment. As a result, these departments are always looking forward to each other to carry out specific functions that could be exclusively handled or accounted for by either department.

In order for divisional/department heads to be accountable, or for the NPA to be properly organised, it is paramount that the organisation and operational procedure be re-defined to reflect the actual functions of each and every division/department.

For better organised procedure, it is hereby suggested that the office of the Harbour Master, should be up graded to a division and headed by the Harbour Master and not the port manager; and the port manager should be responsible for cargo handling, and storage, warehousing, receipt and delivery of cargoes throughput.

As a matter of fact, the Harbour Master has always been responsible to allocate berth, safety of navigation, pilotage, ships' activities and local port regulations in most ports and I do not think the National Port Authority should be any exception.

2.4 Planning and management of the organisation

The rapid changes in development of maritime transport activities have been a global issue and of cardinal importance.

Prudent planning is an essential element, if efficiency is of paramount importance. The continual alteration in ship technology causes huge investments within the port therefore, the handling of cargoes also need to be improved.

The evolution of containers from break-bulk cargo has brought in tremendous changes in port operations whereas strategic planning has become more important. As a result, a good planning of the appropriate handling equipment is essential.

Proper planning of the terminal storage of containers and their movements should be taken into consideration.

For the port to provide good services to the port users, the existing facilities including quay, bounded warehouses and equipment of the port must be rehabilitated and a periodic preventive maintenance put in place.

Presently, the existing navigation aids are obsolete and not functional. For instance, the buoy is very important it guides vessels in and out of the port but are out of order including the lighthouse due to the lack of maintenance planning program.

In both long and short term planning, management should allocate funds to purchase the needed equipment for the smooth operation of the port, and funds should be made available to purchase the appropriate spare parts for the existing equipment.

The National Port Authority (NPA) is completely out of the modern required operational system of a port.

If proper planning, and the necessary mechanism is not put in place now, it will cause a total drain in the port economy resulting into a negative impact on the national economy of the country.

Management needs to prioritised the operations of the port and the funds must be expended on the most needed logistics in order to make the port more productive and efficient.

Funds cannot be expanded without proper planning therefore, it is advised that the entire port operations should be properly planned, organised , and co-ordinated for productivity and efficiency.

2.5 SWOT Analysis

A port relative position within the maritime industry, and its long term profitability, is very much determined by the degree to which it is able to establish a sustainable advantage over its competitors.

It is against this backdrop that the most successful ports in the world institute a self-audit system in order to analyse their strategic position in terms of their own strengths and weaknesses, against the external opportunities and threats. This is referred to as the SWOT analysis, an acronym for :strengths, weaknesses, opportunities, and threats. This has become a very effective measurement in port management decision-making process.

Internal strengths and weaknesses of a port should be easily recognised in all honesty, and appropriate measures taken to deal with them in order to maintain or strengthen a competitive position.

While on the other hand, opportunities and threats externally, are sometimes difficult to identify. Notwithstanding, management should have a well organised plan, and a team with a keen sense of anticipation and the ability to recognise what the critical issues will be and how to deal with them. In this way, the port will be proactive instead of reactive.

The NPA wastes a lot of its vital resources including manpower and funds on problems which the management has no control over, while ignoring those factors that could easily be controlled.

To evaluate the strengths and weaknesses of the NPA, management should focus on its competitiveness as an organisation. In such a case, the items often evaluated are the physical assets available to provide services, the skills and experiences of the port management and its labour force. Including its ability to invest when necessary, and the legal and political constraints the port might encounter.

For effectiveness and efficiency of this evaluation, the following should be taken into consideration:

- ◆ improve the quality of services to meet the demand of the customers,
- ◆ provide the needed logistics for effective operations
- ◆ set objectives and meet performance targets,
- ◆ develop or adapt to new technology,
- ◆ a free flow of information and communication
- ◆ do away with bureaucracy and a
- ◆ systematic chain of command.

The modern concept of strategic planning should be established with incorporation of a mission statement, strategies, procedure, and a clear set of objectives. The objectives should be based on proactive activities and not reactive.

2.6 Customs procedures

It has been observed by the author that customs clearing takes no less than two weeks because documents have to be submitted to several offices for approval and

initialling and this creates problem for the clearing agents who have to struggle daily with the appalling task of arranging delivery under such circumstances. Please see below the existing customs clearing procedures.

THE EXISTING CUSTOMS CLEARING PROCEDURES

STEP	OFFICE
1	Ministry of Finance main office
2	Ministry of Finance /Income Tax
3	Ministry of Finance/Bureau of Customs
4	Ministry of Commerce Trade & Industry/ Minister's office
5	Ministry of Commerce/Office of the Deputy Minister/Adm.
6	Ministry of Commerce/Asst. Minister/Commerce
7	Ministry of commerce/Asst. Minister/Trade
8	Ministry of Justice
9	Ministry of Transport
10	National Port Authority/Controller's office
11	National Port Authority/Chief Accountant's office
12	National Port Authority/Operations Manager's office
13	National Port Authority/Port Manager's office
14	National Port Authority/Finance Dept./Billing Section
15	National Port Authority/Managing Director's office and
16	National Port Authority/Cashier Booth

In addition, the flow of cargo is impeded due to the slow pace of physical handling of document coupled with non-essential formalities and complicated administrative procedures of receipt/delivery of goods. This problem is compounded by shortages and frequent breakdown of the limited equipment.

Nevertheless, the freeport is to be kept under the control of custom in order to avoid smuggling. Goods could flow freely without being subjected to unnecessary formalities.

Custom should not interfere into the normal operations of the port. The routine control should be the ultimate responsibility of the port authority. Custom should retain the power to carry out inspections and ensure that requirements are met in compliance with the established rules.

In order to minimise the delay in the flow of goods throughput, the numerous clearing steps, double examination of documents before final approval should be condensed.

Custom check point should be separated from the port authority security check point and a security officer of the port could be assigned at said gate for check and balance in the daily operations.

Another impediment is the process involved in checking vehicles leaving the exit gate. This process should be properly planned and co-ordinated for expeditious implementation before the arrival of vehicles at the exit gate.

2.7 Flow of information and documentation

Most of the paper work is being done manually with little use of computer. The poor element of timing and delay in processing renders the documentation process inefficient and prone to high error rates resulting into unnecessary delays in the movement of goods in and out of the port.

It is pathetic that the NPA does not have integrated system of communication between its head office and other offices within the port. There is no integrated network system among the organisation and agencies that the port users could have access to and from their own network systems.

Instead, clearing agents proceed down from one office to another, from one desk to another and have to wait over and over again with excessive entries.

For the purpose of speed, accuracy and efficiency, it is necessary for management to computerised the entire record system including the cargo handling operations. The system needs no human interpretation. This system saves time and money, simplifies and accelerates processing of documents. It eliminates copying matching, verifying, correcting and retrieving mass of papers.

The lack of computer link between the cargo handling operations of the port and other departments, has created a serious bottleneck in the movement of cargoes throughput.

Customers are caught in the snarled web of movement between these offices including government ministries.

The disorderly way of documentation and unnecessary formalities as well as the slow pace of information have an effect on speed, efficiency and reliability of goods.

This disorderly manner of documentation has resulted into unnecessary delays and congestion of goods in the port consequently, there exist inefficiency. For speedy documentation, it is essential for management to computerised its entire records system within the port.

CHAPTER 3.0 SYSTEMATIC AND CONSISTENT EVALUATION

3.1 Evaluation of port efficiency

For the last three years, there has been a lot of unnecessary administrative changes within the system and it has created inconsistencies in administrative and operational procedures within the various departments as a result, affecting the organisation as a whole (Human Resource Department/NPA).

The at random transfer of employees on the part of management, is designed to marginalised and frustrate the employees.

Employees are not given the opportunity to plan, formulate or implement any constructive ideas that will benefit the organisation. Employees trained for specific jobs have been transferred in other departments that they have little or no knowledge and after a while, they become frustrated and have to leave the organisation. If this trend continues, management might loss some of its productive employees.

The unnecessary changes have an effect on the performance of the employees because every new appointee has his/her own style of administration and the employees will have to strive to adjust and adapt to these changes made within the various departments.

For the purpose of productivity, and efficiency, there must be consistency and systematic co-ordination within the administration of the National Port Authority.

In addition, the next millennium is fast approaching, ports will continue to react dynamically to the consistent changes that epitomise the political, economic and the entire transport arena.

In this regard, national governments, private sector businesses, municipalities, and state in port industry are constantly working to develop feasible concepts for tomorrow's world.

Furthermore, to guarantee port clients value for money, there should be a continuous evaluation through the SWOT analysis.

Management should exhort all efforts to institute and maintain consistency and should evaluate its strength, weaknesses, opportunities and threats. In this way, management will be in the position to respond quickly to internal problems.

In evaluating its strength and weaknesses, it is important that the port makes comparison with other ports in terms of capacity, productivity, and level of utilisation of berths, equipment and the type of storage space available.

The evaluation of the human resources is also necessary as it is the most important and sensitive resource of the organisation. To accomplish it, management should take into consideration the staff, labour and skills, effective job placement, and a good & healthy labour relations with the work force.

3.2 Leadership style

The shortage of effective leadership is not confined to business but is evident in the lack of able administrators in governments, institutions, churches and every other form of organisation. Thus, when we decry the scarcity of leadership talent in our society, we are agonising about lack of competent people to fill administrative bodies. What we are agonising over is the scarcity of people who are willing to assume significant leadership roles in our society and who can get the job done.

In this light, such person should have the ability to influence people to strive willingly for group objectives and be concerned about tasks and human relationship.

Unfortunately, this is not the case with the leadership of the National Port Authority (NPA). From the author's observation and experience, management is only interest in employees getting the job done and care less about their economic and social needs.

Employees are considered as instruments or machines to be manipulated by their leaders because employees have been dismissed illegally for expressing their views about the ill treatment receive from management. As a result, the workers are striving to adjust to this ugly style of leadership.

Consequently, this method of leadership has had a negative impact on the performance of the work force.

Therefore, it is necessary for management to invent a conducive working environment, crates a surrounding where the work force will feel significant, and part of a team or an entity and their work will become exciting.

There should be mutual trust, respect, and warmth in the relationship between the leaders and the work force. Is about time for the management of NPA to realise that an individual can not run the port without the input of the entire workforce.

Every employee should be recognised and management should take interest in everyone, accepting their individuality and personal feelings.

There should exist a pleasant interpersonal relationship, provide encouragement, give the minority a change to be heard, stimulate self-direction, and increase the interdependence amongst the labour force.

Management should focus its attention on the human aspects of their subordinates' problems and on endeavouring to build effective work groups with high performance goals.

It is necessary that some importance be attached to this situation or management might lose some of its productive staff members and to recruit, train, and develop large number of new personnel into a working team, takes years. In a competitive environment, this is almost an impossible task.

The management of the NPA should realise that its most important assets are **human resources** and managing these resources should be one of its most crucial tasks.

The author has observed that management is seen as having no confidence or trust in subordinates since they are not involved in any aspect of the decision making process.

The bulk of the decisions and the goal setting of the organisation are made at the top and issued down the chain of command. Subordinates are forced to work with fear, threats, punishment, and occasional rewards while they need satisfaction at the physiological and safety levels.

3.3 Effective management versus leadership effectiveness

An effective management is important in all organisations/institutions including the maritime industry in order to cope with the demand of the customers and to keep in line with international standard. This takes into account management, staff, labour and human resources, management activities, including up-grading skills, effective job placement, competency, and a good healthy working environment.

Leadership is a broader concept than management. Management is thought of as a special kind of leadership in which the accomplishment of organisational goals is paramount. Leadership is simply an attempt to influence for whatever reason. Influence and leadership may be used interchangeably.

Leaders could be successful but ineffective having only a short-lived influence over the behaviour of others. On the other hand, if leaders are both successful and effective, their influence tends to lead to long-run productivity and organisational development.

Therefore, It should be pointed out that successful versus effective framework is a way of evaluating the response to a specific behavioural event and not of evaluating performance over time. Long-term evaluation is not a result of a single leadership event but a summation of many different leadership events.

The organisation should be more concerned with efficiency and effectiveness over a long period of time which will increase productivity and might result into an upward trend in revenue generation.

Focus should be on how managers respond to the requirements of port clients and the markets they serve (UNCTAD 1990).

The effectiveness of a good leadership should be measured objectively by his profits centre performance maximum output, market share, or other similar criteria.

Management should put in place an effective system of appraisal, promotion and remuneration without having to wait for a crisis situation. This method will create a conducive atmosphere with highly skilful-motivated and productive workers.

3.4 Manpower development

A leader ought to consider both output (productivity) and intervening variables (the condition of the manpower). These factors should be given consideration in both short and long-term organisational goals. One of the responsibilities of a leader is developing the manpower for which they are responsible.

There is a need to devote time to nurture the leadership potential, motivation, morale climate, commitment to objectives and the decision-making, communication, and problem-solving skill of the employees.

Thus, an important role for a leader, is the development of relevant tasks of their followers. Therefore, management should help the staff to develop and be able to assume more responsibilities on their own and should have a ready replacement who can take over after they have left the system.

The management of the NPA should treat its subordinates in a way that will lead to superior performance but in recent time, it has been observed by the author, that management treats its subordinates in such a way, that has resulted into a lower performance than they are capable of achieving.

A unique characteristic of superior leader is their ability to create high performance expectations that subordinates fulfil. Less effective leaders fail to develop similar expectations and as a consequence, the productivity of their subordinates suffers.

Subordinates are told what to do and how to do it, without any consideration expressed for their ideas or feelings, as a result, after a while, the subordinates respond with minimal effort and resentment resulting into low performance in these instances. If this trend continues long enough, it may reach a point where it cannot be turned around in a short period of time because of the large reservoir of negative past experiences that have built up in the organisation.

Much of the focus and energy is directed toward perceived problems in the environment such as interpersonal relations and respect for supervision rather than toward the work itself.

Reaction to deteriorating hygiene factors takes such forms as hostility, undermining, and slowdown in work performance. When this happens, even if the leader actually changes response, instills distrust and scepticism rather than change.

The leaders of the port authority should take the responsibility for the traditional management functions such as planning, organising, motivating, and controlling. When the manpower is developed, at high level of readiness, the manpower can take over much of the responsibilities for the day-to-day traditional management functions.

Through the development of the manpower, the leaders can invest their time in high payoffs management functions and these associating activities will enhance the group's performance when workers can take responsibility for their own tasks on a day-to-day basis.

These functions include acquiring resources necessary for maximising and co-ordinating their group's efforts with that of other departments to improve overall productivity. In this light, the leaders, instead of getting trapped in tunnel vision, has time for long-range strategic planning and creativity.

In order for the port to maximise its potential in high-payoff functions, there is a need for a change in the leadership style and take an active role in helping others grow as the development of manpower depends on values and expectations.

It is paramount to identify the subordinates' responsibilities and the goals and objectives of management. It should be clearly defined what constitutes good performance in each department/division.

Effective management of manpower development requires a more sensitive balance between efforts to improve total productivity and efforts to improve job satisfaction.

Approaches that aim at imparting skills while influencing attitudes usually require simultaneous changes in the organisational environment.

Eventhough, the port is currently overburdened by excessive indebtedness and should allocate a substantial portion of its budgetary expenditures toward the repayment of debts, within this scenario, expenditures on human development budget tend to be restrained and are often subjected to a downward trend in proportion to the total budget expenditures.

However, management should take into consideration the principles of cost effectiveness and maximum productivity. Because to develop or maintain an adequate level of output, it is necessary to develop the ability and effectiveness of the manpower.

Notwithstanding, since manpower development is a slow, cumulative process, it is necessary for the system to be guided by the principles of sustainability and continuity. Management should do more with less.

The planning and management of manpower development have become a very important task for all institutions and organisations due to the technological revolution which is taking place globally. Therefore, management should develop the manpower, help them to grow and become independent in their respective areas of assignment.

The transition to a new technological era represents a system of interrelated changes, such as the declining demand for labour force per unit of GNP, the transformation in the structure of employment by branches, the shifts in skills and occupational patterns, the increasing demand for highly skilled and professionals.

Also the evolution and spread of technological revolution, and the great differences in its speed, it is important for port industry to better prepare for the impact of technological change.

Eventhough, the qualitative improvement of management and the development and utilisation of manpower are difficult tasks, but these objectives can be achieved within a framework of comprehensive policies and long-range planning in an environment of concrete socio-economic conditions.

Manpower development involves a well co-ordinated approach. It calls for a harmonisation of social and macroeconomic policies, robust feed-back arrangements between technological changes, educational systems and training; and a comprehensive plan to fully utilise human skills and continuously upgrade workers' skills.

Experience shows that a paucity of trained professional, lack of infrastructure, and the absence of monitoring and evaluating the systems, as well as the mechanisms for correcting programs, are great handicaps for all organisations, and institutions including the National Port Authority.

3.5 Recruitment

Prior to the civil war, the National Port Authority had a total number of 1,685 (One Thousand Six Hundred eighty-five) permanent employees and 200 (Two Hundred) casual workers. The port stopped operations on June 29, 1990 due to the civil war.

After the 1990 civil war subsided, the NPA resumed operations in 1992 and a memorandum of understanding was executed between the Board of Directors of the NPA and the representatives of the employees, putting on compulsory leave 50% of the labour force because of the reduction in the volume of business of management by 70-80%. The organisation could not cope with its operational and manpower budget during these critical period.

However, in December, 1997, management re-called 112 (One Hundred Twelve) compulsory leave employees and out of that number, twenty-seven of them were subsequently retired. Presently the total number of employees of NPA is approximately 1,266 (One Thousand Two Hundred Sixty-six) permanent employees and 65% of the new employees are from the central government with little or no knowledge in port operations.

For the past decade, the government has had some level of control over recruitment of staff of the NPA. Government control over recruitment in the port should be

discouraged because the efficiency of the port organisation can be markedly affected by the pattern of government control of recruitment.

Recruitment is a very important aspect of the port, and the necessary procedures should be followed carefully in filling a position.

In some organisations, the common approach for recruitment is to wait until a vacancy occurs, to seek approval for filling the post through the internal bureaucratic procedure, and then to advertise in the local press.

This process often takes time and does not guarantee that suitable applicants will come forward, particularly for specialist technical posts. In many ports, these circumstances do not exist, and recruitment is often a problem.

Few ports seem to have developed a policy of forecasting staffing needs and planning ahead to meet those needs.

One of the best methods of approaching that problem, for posts above the basic levels, is to plan for succession, by developing and training junior staff to take over higher posts as they become vacant. Some ports maintain contact with local schools and colleges, and even encourage students to work in the port during the holiday periods, to gain experience and the wish to be recruited after graduation.

Where the port is expanding one of its specialist section a similar low-key recruitment drive could be pursued in universities and polytechnics and the best students could be encouraged through scholarships and similar awards.

I would suggest that the formal interview often involving the managing director, deputy managing director ect. should be discontinued. Aptitude and technical tests

should be employed, to ensure that the recruits are entirely suitable for the post. In addition, consideration should be given to the level of experience of the potential recruits for the positions to be filled. The appropriate, medical tests should be carried out including physical fitness, perfect vision ect.

The administrative procedures relating to recruitment must be strictly controlled to ensure fairness, with the appropriate regulations on employment followed carefully. Also, the bureaucratic element must be kept in firm check.

Appointment must be made purely on the basis of suitability for the job without favour and the following should be made clear to the employee from the first day of his/her employment:

- ◆ The duty of his/her job,
- ◆ To whom he/she reports and who reports to him/her,
- ◆ What lines of communication he/she must obtain,
- ◆ Must be told exactly what is expected of him/her,

Any alterations to the nature and scope of his/her job must be made through negotiations with appropriate training or re-training provided. After all, every individual appointed is a component of the port's manpower development plan and should be treated as such from the moment of appointment.

3.6 Training

The key to a successful manpower development plan, is an effective comprehensive training program and facility. Training is a crucial requirement, not only to build up technical knowledge and capabilities, but also to create new values to help individuals and nations cope with rapidly changing social, environmental and developmental realities.

Training can be successfully done by the involvement of employers and workers in the planning process. Such involvement implies direct participation not only at the higher levels of planning within the training system, which is the case with the NPA but also at all levels of overall planning to meet the objectives.

The objectives of training are:

- ◆ To facilitate socio-economic growth and development and the process of modernisation and industrialisation,
- ◆ To create productive employment opportunities,
- ◆ To increase the productivity and utilisation of labour by developing and upgrading managerial and technical skills, as well as leadership and entrepreneurial capabilities, and
- ◆ To create a suitably skilled and adaptable labour force to meet the future skill requirements of the economy arising out of structural and technological changes.

Training of the employees should be effectively geared to producing a pool of suitably skilled manpower that would not only be a source of productive labour supply, but also be able to meet the skill demands arising out of the growth and structural transformation of the economy.

The Training Department should be concerned and preoccupied with the long-term forecasts of manpower availability. The ultimate objective should be to ensure the availability of the right kind of manpower in the right number at the right places and to avoid overlapping of functions.

It has been observed by the author, that there is a problem with overlapping of functions and in order to overcome this problem, it is necessary to involve all

departments in both training programs and manpower development planning activities at all levels.

An analysis must be made of the efficiency and effectiveness of the training system in respond to changing market requirements, and the effective evaluation mechanisms for education and training programs.

Training adjustments have to take place not only in terms of responding to changing skill demands, but also in terms of enhancing the quality of human capital to ensure competitiveness and efficiency of services.

Given the short, medium and long-term consequences of the technological revolution, the port needs to remodel the system of training in order to produce qualified personnel capable of handling modern equipment.

Highly educated and a well-trained healthier personnel is a prerequisite for economic growth and development.

In this light, there is a need for innovative management processes to utilise the limited resources rationally, effectively, economically and productively. As we prepare to step into the twenty-first century, we must cater for extraordinary growth of the human race.

In view of the above mentioned, and with the consistent request made by the Technical, Marine and Operations Departments concerning shortage of trained personnel within the technical and operational areas of the organisation, I would like to suggest that management prioritise training of its employees and special focus should be on the technical areas including Marine, Mechanical, Electrical, and Civil Engineering sections.

In addition, the equipment operators of the operations department, tally clerks, supervisors and billing clerks should also form part of the training program. The chart below explains the required areas necessary for training.

AREAS NECESSARY FOR URGENT TRAINING

Specialisation	Required areas for training	Proposed number of personnel
Engineering	Mechanical Engineer	4
	Electrical Engineer	4
	Civil Engineer	4
	Marine Engineer	4
Navigation	Pilots	4
	Radio operator	2
Technician	Electrician	5
	Mechanic	5
Supervisory	Junior & Supervisor Supervisors	6
Tally clerk		8
Billing clerk		8
Operator	Equipment operator	5
	Radio operator	2
Superintendent	Warehouse, pier & park superintendents (two in each area)	6
Total number of personnel required		67

Table 1

There is an urgent need for training in the areas specified above because presently there is only four pilots in the system and over the last couple of months management, has loss two of its trained employees; a marine engineer and a supervisor hence, there is a need for replacement.

According to the Operations Department 1998 1st quarter report, a request was made for training of equipment operators because, some of the operators have been retired due to old age and long service in accordance with management retirement policy.

The increase in the number of aged also affect the level of productivity. Ageing means an increase in the working life span, which makes greater investment in training and retraining meaningful and necessary.

3.7 Motivation

Motivation is an important tool used to encourage employees increase their performances and efficiency. The most obvious motivating strategy is to offer the employees an attractive career structure, with opportunities for promotion throughout.

Training is an incentive of motivational tool. Training gives employees the opportunity to improve themselves and become more dependent and reliable, as a result, responsibilities can be dedicated to them with little or no control.

Welfare is another motivational factor, it cements the relationship between management and the labour force.

Wages are also factors for motivation because payment of low wages have negative effect on the output of employees.

Management could also provide intangible goal, if individuals need for recognition is strong enough, being praised by the boss may be an effective incentive in influencing people to continue to do good work.

Praise is also an incentive that will help satisfy this need where people are viewed as contributing-productive people.

In a working situation, the need for good wages, job security, promotion, and good working conditions are what workers want most from their jobs and also full appreciation for work done.

Interpersonal relationship is one of the most significant factor affecting the productivity of the NPA. Is not just pay and working conditions but that relationship that is developed on the job. Also the quality of communications that managers receive from their employees is often based on the rapport that has been established between the workers and the administration.

It should be remembered that if you want to influence another person's behaviour, you must first understand what motives or needs are most important to that person at that time.

In the same light, what is appropriate for a new employee may not be meaningful for an employee who has been with a corporation six months or a year. There may be distinctions between employees who have been with an organisation for only a few years and those who have been with it for longer period of time.

Motivation could be increased by providing an environment in which subordinates can play a role in setting their own goals. Commitment increases when people are involved in their own goal setting.

If individuals are involved, they will tend to engage in much more goal-directed activity before they become frustrated and give up.

On the other hand, if their boss sets the goals for them, they are likely to give up more easily because they perceive it as their boss' goals and not as their own.

Management should create an environment where the employees will be given the opportunity to acquire maximum training and also participate in setting goals to meet the over all objectives of the entity.

3.8 Teamwork

For the port to become more productive, and efficient, it is necessary for the workers to be organised into teams. At a higher levels, it is a matter of encouraging managers in the various departments and sections to adapt a co-operative team approach to their work, communicating with each other regularly, taking decisions with full consideration of the consequences of those decisions.

The idea of teamwork should be extended to a wider context of the port, that every employee will have the sense of belonging, and feel as part of a team sharing the corporate objectives and upholding the company ethos. It is within this larger team that company loyalty is engendered and discipline can be maintained.

3.9 Information Technology

Effective information is a vital tool in all organisations. A comprehensive data base should be developed where information concerning the movement of cargo, vessel traffic, pre-arrival preparation of documents for ships, customs activities and other relevant data are made available to all port users.

There should be a free flow of information between management and the workforce as effective information is very vital if an organisation must become more productive and efficient.

CHAPTER IV

4.0 PORT OPERATIONS AND ASSOCIATED PROBLEMS

4.1 Problems with Infrastructure and superstructure

Ports infrastructures play a major role in enhancing productivity and efficiency, eventually increasing revenue generation.

Most of the National Port Authority infrastructures and superstructures including quays, transit sheds, tug boats, forklifts, computers, navigational aid, were either damaged or looted during the civil crisis.

Major infrastructure and land equipment were damaged as a direct consequence of the nine years civil war. Those damaged include: Two tugs GRT 260/385 and one mooring launch were sunk while another tug GRT/260 was beached and subsequently vandalised.

One pilot boat, one tug and dredger remain afloat but vandalised. These crafts need urgent dry-docking for hull, bottom repairs and refitting of machinery parts and equipment for re-classification. All major plants and equipment were vandalised and /destroyed.

Substantial damage was done to the marginal cargo wharf a general cargo facility that is 610 metres (2000ft.) by 10.97 metres (36ft.) wide. A 56 foot length of the slab deck, as well as portions of the grillage beams and supporting steel H-piles collapsed at the mid-section of the wharf making the movement of cargo impossible along the full length of the wharf. Four sections at different locations of the wharf were damaged and several sections of the edge beam have been destroyed (Marine Department/NPA).

As the result of these damaged infrastructures and superstructures couple with the inadequacy of equipment, continue to pose serious problems to the port operations and its users.

Presently, there is only (one) 1 tug boat available in the system and according to safety precautions, it is important for a tug assistance to facilitate vessels to berth at the port. Beside the tug boat, management has only one pilot launch.

These very crucial situations, may bring a halt to marine operation in case of breakdown of the only available tug in the system. Therefore, management should secure funds to acquire a second tug. The existing tug needs immediate dry-docking to remain operational and regain its classification certificates.

In the event the vessel has to be dry-docked, a replacement tug must be made available to ensure continuous port operation. Any arrangement short of the aforementioned will imperil the interest of the NPA and the nation as a whole.

4.2 Equipment management

Technological development in shipping and rapid changes in cargo handling methods, has resulted into an immense investment in port cargo handling equipment which need continuous and effective maintenance.

In many modern ports high proportion of the capital and operating budgets of port authorities are devoted to port operation and maintenance of cargo handling equipment. The benefits of these investment will not be realised if the equipment are not properly operated and maintained.

Neglect of these equipment causes very rapid deterioration. Therefore, if the problems with equipment procurement operations and maintenance are not resolved, the efficiency of cargo handling operations will continue to decrease and the financial and other benefits of technological change will be lost to the economic of the neighbouring countries.

The lack of equipment has threaten the ability of the port to perform its primary task of providing the facilities and services required to meet the maritime trade.

It is incumbent that management establish a comprehensive policy strategy and procedures for procuring, operating and maintaining its cargo handling and other machinery.

4.3 Problems of maintenance

Poor maintenance of infrastructures and superstructures is one of the characteristics of most ports in developing countries including the NPA. Valuable equipment costing millions of dollars have been put out of operation due to lack of maintenance and spare parts.

Maintenance capability is a crucial factor in determining how successful the adaptation of new technology will be as regard the effective utilisation of mechanical handling equipment in port operations.

The existing maintenance programme should be rectified to enable management realise the maximum benefit of service from every piece of equipment that is procured.

Poor maintenance has often resulted in scrapping expensive equipment long before the first or second anniversary in operation.

It has been observed that most of the time management contract engineers to carry our repair/maintenance works on its equipment and this has become very expensive for the organisation. Instead of contracting external contractors, it is advised that management recruit well trained and experienced engineers or train its technicians within the system and put in place a preventive maintenance schedule free from interference with port operations. Also procure the right type and quality of spare parts.

On several occasions, equipment are taken to private workshops for repairs due to the lack of poor facilities at the port's existing workshops.

According to the Technical and Marine Departments annual report, request has been made for urgent renovation and furnishing of the maintenance workshops at both departments but up to present nothing has been done about these shops. It is important that management renovate and equip those workshops and also re-train or recruit qualified engineers and technicians to effectively manage them.

The poor facility of the workshops at both departments, makes it difficult for the technicians to perform their task effectively as a result, has an effect on their performance and also affect the operations of the port resulting into the following consequences:

- ◆ Low availability
- ◆ Low output and performance
- ◆ additional and unnecessary port investments
- ◆ additional operating costs
- ◆ impact on port users

- ◆ hindrance to be competitive
- ◆ negative effect on the national economy

In order to improve equipment maintenance of the port, the following should be taken into consideration:

- ◆ preventive maintenance: take action before failure occurs,
- ◆ fixed time maintenance :is the ideal method of achieving good maintenance with limited resources.
- ◆ opportunity maintenance: it is the practice of taking advantage of every non operational period. (UNCTAD,1990).

If equipment are kept in good condition, they break down less frequently and perform more effectively, thereby, maximise the effective capacity of port facilities with minimum investment.

Therefore, port's profitability and competitiveness are inextricably bound up with the efficiency of the maintenance capacity.

Good maintenance is the basis for equipment reliability and high availability on which the port's reputation for service depends and it is the maintenance of equipment which merits the highest engineering priority and offers the major challenge.

There must be a fundamental change in management culture with a much increased emphasis on customer service and performance-orientated maintenance.

This can only be achieved through well defined maintenance strategies, supported by reliable preventive and corrective maintenance procedures. Good workshop facilities and engineering practices must be established within a frame work of an efficient

workshop administration and information system. The chart below gives an analysis of equipment of the port.

**EQUIPMENT ANALYSIS
OF THE NATIONAL PORT AUTHORITY**

Equipt.Type	QTY.	Availability	Unavailable	Tons	Yr.purchase_
Top lifter	17	1	16	2½	1978
Trailers	17	-	17	30	1979
Top lifter	1	1	-	14	1988
Toplifter	2	2	-	10	1979
Tractor	4	1	3	10	1990
Container Heavylift Toplifter	2	2	-	35	1998
Container Heavy lift Toplifter	2	2	-	35	1988
Container Emptylift	2	2	-	8-10	1998
Tractor	2	2	-	35-40	1989
Containerlift	11	2	8	4-42	1978

Table2; Source:NPA Annual Report/1997 & 1998

According to the equipment analysis some of the equipment have exceeded their economic and physical life span therefore, they need to be replaced. The intensive

use of the limited equipment will create a greater wear and tear as a result increases maintenance and repair costs.

4.4 Problems with procurement of equipment and spare parts

The lack of appropriate procurement policy and strategy has posed serious operating and maintenance problems. There is a lot of deficiencies in the procurement procedure. On the basis of personal interest, management procurement practices have prevented acquiring the appropriate equipment for the smooth operations of the port.

Management has purchased equipment without securing spare parts and taken into consideration the capability of the maintenance staff to service these equipment. As a result, there exist variety of units which has created standardisation problems.

The procedure for procurement has been disregarded. Normally, procurement policy requires three quotations for stock items to be purchased locally in domestic currency. Purchases involving foreign currency was done through a sealed bid procedure. The procurement procedure for acquiring spare parts for equipment is complicated and lack of spare parts leads to poor maintenance.

Therefore, management should revised the policy, set up a team comprising engineers, operators, the finance and procurement departments who will give the necessary specifications, characteristics, identify the type and volume of cargo, allocate funds for the procurement of the appropriate equipment and spare parts respectively.

4.5 Equipment plan

It is essential for management to establish an effective equipment plan if it is to make the optimal use of the limited resources.

The plan should form part of the corporate plan. Investment requirement for equipment has made it essential to prepare a comprehensive equipment plan, so that investment can be carefully planned according to the expected returns.

The plan is fundamental to the efficiency of port operations and maintenance. Therefore, prudent attention should be given in setting up the plan with the involvement of Technical, Procurement, MIC, Operations and the Finance Departments. There should be a detailed pertinent information that constitutes the basis for the plan.

4.6 Maintenance policy

The Technical Department is responsible for preventive maintenance and repair of all equipment. Therefore, it is necessary for management to set up a well equipped maintenance workshop and ensure that the needed spare parts are available at all times.

Consideration **must** be given to the qualification and experience of employees assigned in the workshop. One of the criteria of technological change for cargo handling equipment, is the need for ports to employ engineering staff with an ever broader range of specialist technical skills.

Acquiring the right type of equipment and spare parts should be prioritised because the success of a port depends on its cargo handling equipment.

Including efficiency and speed in cargo handling, loading and unloading from ship-to-shore, in ship hold, from the quay to storage or container freight station (CFS) up to final destination.

4.7 Replacement of equipment

Some of the existing equipment are too old and obsolete and it has become more difficult to find spare parts on the market for these equipment. The economical and physical life of these equipment have long expired. Refurbishment has become a major problem and very expensive. In this connection, it is paramount that management procure new equipment for effective port operations.

It is also essential that purchase dates of each unit of the port's equipment be recorded, including operating and maintenance cost and repair job done. The data will indicate the condition and subsequent replacement of each equipment where necessary.

In replacing a piece of equipment, comparison should be made between the predicated operating and maintenance costs of that particular equipment and the proposed replacement machine. In order for this exercise to be effective, it is important that a detailed data on cost of operating and maintaining each unit of equipment during the whole of its working life be made available.

In addition, consideration should be given to cost apportioned to labour, spare parts, fuel and lubricants and any other expenditure.

Management should prioritise the replacement of equipment because the few units that are available, the more intensively those machines have to work, they are subjected to greater wear and tear and the amount of maintenance required increases and maintenance cost become expensive.

There should be an adequate equipment allocation and regular inspection by engineers to prevent the container handling operations from relying on a repair-on-breakdown maintenance as it has been in the past.

The equipment allocation is to ensure that traffic officers receive the right type and quantity of equipment just in time to meet operational needs and to maximise cargo-handling performance. Also, to avoid the excessive use of equipment unnecessarily.

CHAPTER V

5.0 Consequences of inadequate investment, poor management and operational procedures

5.1 Problems with transport link between the hinterland and the port

Prior to the civil crisis, there were transport links by road and rail between the port and the hinterland but the effects of the war have resulted into a complete damaged to the rail tracks making it impossible to use at the moment.

Presently, hinterland connection is becoming the veins of the ports around the world. The new concept of door to door and just in time delivery/services, ports are now changing from being just loading and unloading points to distribution centers. Therefore, good transport connection is required between ports and the hinterland. Ports with such connections will certainly have competitive advantage over other ports in satisfying the requirements of the shipping industry.

The deplorable condition of the hinterland transport links have resulted into the loss of transshipment traffic to the neighbouring countries which has also affected the economy of the port and the national economy in general.

Therefore, it is suggested that the Government of Liberia should consider as a priority the rehabilitation of the roads and rails connection to the port and it will increase the revenue generation of the port benefiting the country and its inhabitants in general.

5.2 Poor nautical channel

Large vessels can no longer use traditional trading routes or ports because of the draft. The draft of large vessels are greater than the depth of water available so the

deeper the nautical approach, the more advantage the port has to accommodate larger vessels.

According to the Marine Department of the National Port Authority, presently there is a massive sand bank between the breakwaters extending from the south breakwaters to the middle of the channel of the freeport of Monrovia.

The existing dredger does not have the capacity to dredge the entrance channel of the port because of the gravity of siltation.

Therefore, it is necessary that management secure funds to hire an additional dredger with the capacity to implement intensive dredging and also to rehabilitate the existing dredger.

It is paramount to constantly carry out maintenance dredging, in order to increase the depth between the breakwaters. The present depth in this area is about (six) 6 meters at low tide (Marine Department/NPA).

Maintenance dredging of the channel is cardinal to facilitate free access to vessels calling at the port. The last maintenance dredging was performed on November 19, 1998 when the quantity of sand/soil dredged from the entrance channel was 32,420Ms (Marine Department/NPA).

**DESCRIPTION OF THE
PORT ENTRANCE CHANNEL AND BERTH**

ENTRANCE CHANNEL	FIGURES
width in meters	15.2
Depth of water in meters	14.50
Depth of harbour in meters	13.50
GENERAL CARGO BERTH	
Total number of berth	4
Total length in meters	610
Depth of water in meters	10
Width of apron in meters	7.62
OTHERS	
LMC converted berth	2
Total length in meters	2 X 230
Depth of water in meters	10.97

Table 3 ; Source: NPA/Marine Dept. Annual Report

According to the chart above, out of the four berths only two are operational presently, due to the indentation on the slab of the mid section of the main quay as a result of the civil war. This situation has created a limitation on berthing space.

**FREEPORT OF MONROVIA
ANALYSIS OF BERTH OCCUPANCY RATIO, 1998**

Figure 1; NPA Annual Report/1998

Figure 1 is an analysis of berth occupancy ratio. The berth occupancy ratio dropped from an average of 58.8% during 1997 to an average of 46.4 % in 1998.

5.3 Inadequate marine craft

Prior to the civil war, the National Port Authority had four tugs and three pilot boats but as a consequence of the civil war, the port is left with only one tug that is available to assist in berthing and unberthing of all sizes of vessels. Also there is only

one pilot boat in the system which is inadequate to serve the port. Please see below an analysis of marine crafts of the National Port Authority.

ANALYSIS OF NPA MARINE EQUIPMENT	
PRE WAR TUG (S)	POST WAR TUG (S)
Mt. "Bentol" 3,900 (BHP)	Mt. "Bushrod Island" 2,300 (BHP)
Mt. "Bushrod Island" 2,300 (BHP)	
Mt. "Stockton Creek" 1,700 (BHP)	
PILOT BOAT	PILOT BOAT
ML. "Ducor" 460(BPH)	ML. "Ducor" 460 (BHP)
ML. "Mamba Point" 400 (BHP)	
ML. "Sinkor" 400 (BHP)	

Table 4; Source:Marine Department/NPA

The analysis of the current fleet of marine crafts in the system indicates a clear picture of the problems with marine crafts. Most of these crafts were damaged during the war and the acute shortage has a great effect on the port operations.

The existing crafts are over utilise and the intensive use of these marine crafts will cause a greater wear and tear, as a result, maintenance require will increase likewise the cost. Replacement of these crafts should be considered to avoid the excessive use and a total breakdown which will put a complete halt to marine activities of the port.

5.4 Lack of vessel traffic system (VTS) and navigational lights

Many ports around the world are equipped with vessel traffic system that provides vessels calling at the ports with the necessary information and guidance and also help to insure the safety of vessels within the port zone. The VTS includes a good radio communication system that is use to communicate in advance with ships calling at

ports. This system is also used to plot the ships position and predict their trend and speed.

The vessel traffic system also predict the estimated time of arrival (ETA) for vessels calling at ports. It helps to speed-up the loading and unloading process of cargo because if the time of arrival of vessels is known, the appropriate cargo handling equipment will be made available together with the right proportions of gang to carry out the operations promptly. It helps to save ship time in port.

As mentioned previously, navigational lights is very important in the port. The lights help to guide vessels in an out of the port but since the civil crises, the navigational lights are completely out of order and management has not done anything about replacing these lights, despite the numerous request made by the Marine Department.

In light of the above mentioned, management must make the sacrifice to invest in the most needed logistics for safe operation of vessels calling at the port.

5.5 Poor container handling facilities

The National Port Authority does not have any quay crane for container handling operations. Containers are loaded and unloaded by using ship derricks and subsequently transferred from quay side to container park by toplifter or forklift. This process is very slow and makes it impossible for more than one container ship to be handled at a time. The slow pace of container handling increases ship time in port, and shipowners' expenses.

Lack of container handling equipment has caused a decrease in container activities in the port. There was a decrease in the number of containers and containerised cargo during the period: January-December, 1998 compared with the same period in 1997.

The port handled a total cargo throughput of 513,560.6 metric tons in 1998. This represents an increase of 43,476.6 metric tons or 9.2% compared with the throughput of 470,084 metric tons in 1997.

Import tonnage decreased by 2.3% from 384,152.3 metric tons in 1997, to 375,346 metric tons in 1998 while export cargo increased by 60.8% from 85,931.7 metric tons in 1997 to 138,214.6 metric tons in 1998.

With specific reference to container trade, there was a decrease in the number of containers and containerised cargo during the period under review, compared with the same period in 1997. The import/export graph illustrate a decrease in twenty-foot equivalent units (TEUs) handled, from 18,600 TEUs in 1997 to 17169 TEUs in 1998, representing a decrease of 8% (NPA 1998 annual report).

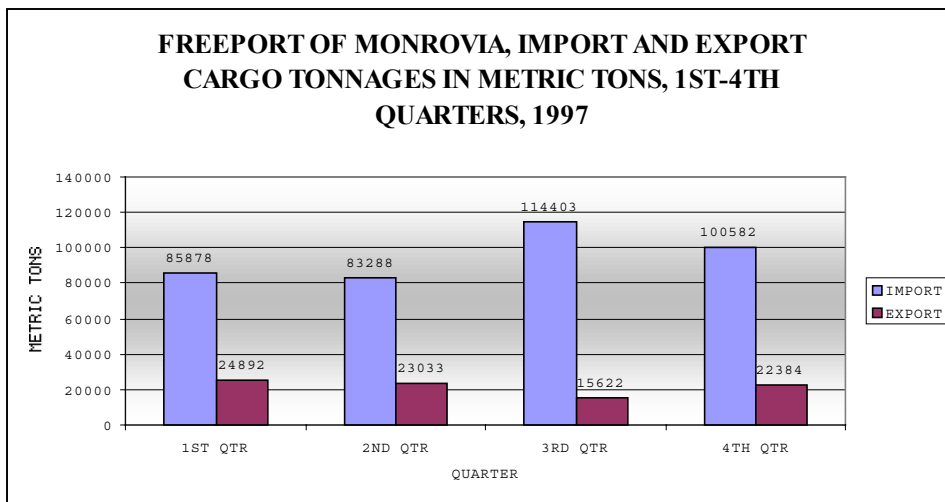


Figure 2; Source: NPA Annual Report

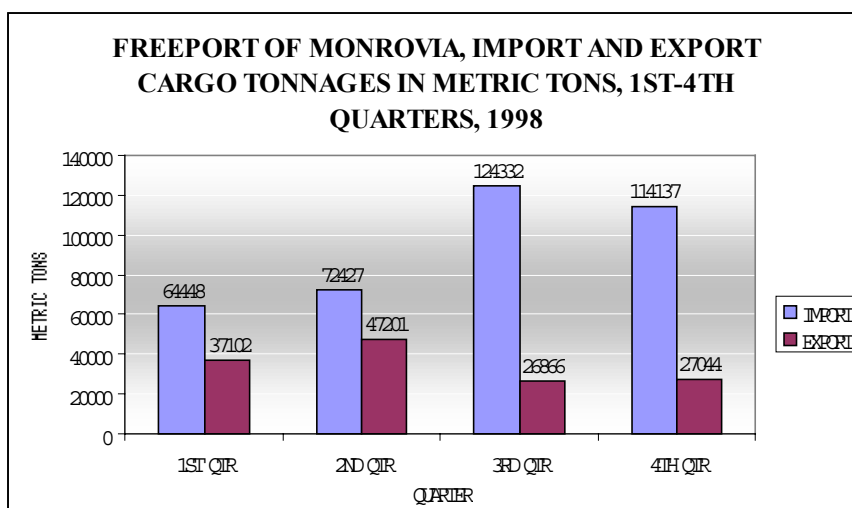


Figure 3; Source:NPA Annual Report

Lack of investment has resulted into an inadequate container handling equipment which has caused a decrease in container activities in the port. It also reflects a dramatic decrease in cargo traffic from 4,033,628 metric tons as total tonnage during the period; 1985-1989 to a total of 1,335,749 metric tons in 1990-1996. During the period 1990-1996 export cargo tonnage decreased from 37 million tons to 910,991 metric tons. The table gives the analysis of cargo handled in metric tons during the period specified above.

ANALYSIS OF CARGO HANDLED IN METRIC TONS

YEAR	IMPORT	EXPORT	TOTAL
1990	59,264	723,010	782,274
1991	155,719	20,551	176,274
1992	195,944	28,054	223,988
1993	238,928	27,332	266,260
1994	200,407	30,072	237,479
1995	267,252	31,452	298,704
1996	218,235	50,520	268,755
TOTAL	1,355,749	910,991	2,253,734

Table 5; source: NPA Annual Report

The above table shows a decrease in import and export cargo which is represented by 67% and 99.98% respectively. From a total of 2,253,734 as cargo handled from 1990-1996, 371,661 metric tons which represents relief food.

It is paramount for management to purchase container handling equipment because these equipment determine the financial survive of the port. Without the needed and required cargo handling equipment , there will be a decrease in income generation of the port.

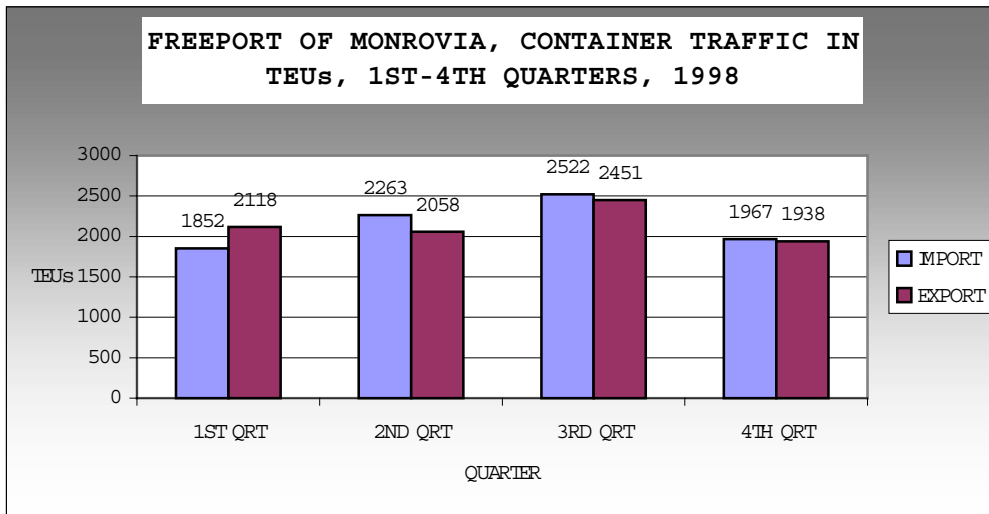


Figure 4; source:NPA Annual Report.

5.6 Lack of storage facility for loose cargoes

Since the civil crisis, management has not repair all of its warehouses due to the so-called lack of funds. This situation has created a serious bottleneck in the storage of loose cargoes.

Most of the time loose cargoes are stored in empty containers owned by shipping agencies and the unauthorised use of these containers to store loose cargoes, continues to pose tremendous embarrassment to management and a loss of revenue by waving storage charges (Operations Department/NPA).

Most of the world's great trading centers including Amsterdam and Antwerp have achieved and succeeded in utilising bonded warehouses and the achievement comes from the level of investment and information control.

Bonded warehouses are significant and do not need a lot of investment cost compared to other facilities of the port.

To avoid the embarrassment to our customers and management, it is hereby suggested that management should repair the existing warehouses or erect warehouses for the storage of loose cargoes.

CHAPTER VI Conclusion and recommendations

6.1 Conclusion

Prior the civil crisis, the National Port Authority serviced distant economies through its transshipment business. Particularly those countries in the sub region, benefited from these services. Prominent among these countries are those with rural communities along borders that are adjacent or close to the port industry.

In addition, the authority is a significant and reliable revenue generator for the government. Of paramount importance, a substantial portion of the public finances it generates is in hard currency (foreign exchange). Therefore, rehabilitating port facilities will thus enhance efficiency and revenue generation capacity of the National Port Authority and the Liberian Government as a whole.

One of the most important aspects to conceive in operating an efficient port, is **investment** in the required facilities to provide the essential services to the customers, attract potential customers, and to keep in line with international standards. Management should improve its facilities, and services in order to maintain its customers and to attract potential customers.

Development in ships size have made shipowners to be very particular in selecting ports of call and these changes will continue to have a negative effect on the NPA if we do not improve our facilities to accommodate these vessels.

The port should be developed into a modern port. Management should extend the quay, procure and install modern cargo handling equipment that will help to eliminate vessels waiting for berth and therefore minimise ship's turnaround time. In addition, the existing wharves should be rehabilitated.

Funds generated should be expanded on the most needed logistics that will provide services to port users. Management should exercise cautions in establishing priorities and in undertaking meaningful projects.

Training of workforce must be prioritised in order to cope with the rapid development in technology.

Computerisation should be adapted and to implement it, the collection, storage and dissemination of statistical data and information must be accurate and reliable. This plays a major role in planning and analysing the port performance.

Considering the trend in shipping now, a large number of cargo is shipped in containers, therefore, development of containers facilities at the port must be of importance. The container park should be extended and storage of containers on the quay apron must be discontinued as they blocked the quay and makes it difficult for the smooth movement of containers.

6.2 Recommendations

A positive trend towards the economic recovery of the NPA and the national government in general, highly depends on the level of investment including the acquisition of cargo handling equipment and marine crafts which are essential to sustain port operations.

The port efficiency contributes to an enabling environment that enhances Liberia's international trade. Also the sea port is the medium through which construction materials and equipment will be brought into the country for national rehabilitation and reconstruction. For productivity, and efficiency of the National Port Authority (NPA), I would like to suggest the following:

- ◆ recruit or train employees to handle modern equipment
- ◆ prioritise training and re-training of port personnel
- ◆ provide adequate cargo handling equipment (straddle carriers, quay side cranes, front end loaders, & reach stackers)
- ◆ provide marine crafts
- ◆ ensure the availability of the appropriate spare parts for equipment within the system at all times
- ◆ set up a well-equipped maintenance workshop
- ◆ facilitate the dry-docking of “Mt Bushrod Island”
- ◆ procure and install navigational aids to ensure berthing and sailing of vessels
- ◆ install a VTS within the port
- ◆ streamline bureaucracy of custom clearing
- ◆ computerise the entire records system of the organisation for a more efficient and speedy documentation
- ◆ rehabilitate/renovate all damaged warehouses
- ◆ rehabilitate the marginal wharf and install fenders
- ◆ construct a container terminal which is long over due
- ◆ extend the breakwaters by 50 meters and conduct capital dredging.

For the port industry of Liberia to become more viable, it is advised that all commercial activities should be handed over to the private sector. Most ports in Europe are run by private companies and these ports are very successful.

Management should put in place short and long-term strategic planning to attract new traffic or protect the existing one. Strategic planning is necessary to determine the new course of the port in the competitive market.

The recommendations made in this study, if carefully considered and applied, can ensure maximum benefits but the responsibilities lie with the government and the port authority to make the right decisions.

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APPENDIXES

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