Saudi Arabian coastal surveillance

Hamza R.H. Al-Amri

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ORGANIZATION
OF
SAUDI ARABIA

COASTAL SURVEILLANCE

BY

HAMZA RASHID HAMZA AL. AMRI

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A Paper submitted to the Faculty of the World Maritime University in partial satisfaction of the requirements for the award of a

MASTER OF SCIENCE

IN

GENERAL MARITIME ADMINISTRATION

The contents of this Paper reflect my personal views and are not necessarily endorsed by the University.

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IN THE NAME OF GOD,
THE BENEFICENT,
THE MERCIFUL,
DEDICATION

To my country, Saudi Arabia.

As a gratitude to the favours with the hope that full use can be made of this project.

To our new generation SULTAN, TURKI and AHMED.

To all those who sacrificed during my study at World Maritime University.
ACKNOWLEDGEMENT

Before I express my thanks to the individual, I acknowledge all thanks to ALMIGHTY GOD.

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ABBREVIATIONS
OF
ORGANIZATION CHARTS

D.G.  Director General
D.C.  District Commander
D.C.Ass.  District Commander Assistant
Dis.  District
H. Est.  Hovercraft Establishment
N.I.  Naval Institute
T.C.  Training Centre
A1  Operations Department
A2  General Department
A3  Officers Affairs Department
A4  Logistics Department
A5  Marine Affairs Department
A6  Financial Affairs Department
A7  Landing and Aviation Department
A8  Telecommunications Department
A9  Engineering Department

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A10  Budget Department
A11  Investigation Department
A12  Tender and Contract Department
B1   Military Board of Inquiry
B2   Directorate Security Unit
C1   Al-wajh Frontier Forces Headquarters
C2   Al-quariat Frontier Forces Headquarters
C3   Jeddah Frontier Forces Headquarters
C4   Arar Frontier Forces Headquarters
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F3 Naval Training Centre
ABSTRACT

Saudi Arabia has two coastal sides, the Red Sea and the Arabian Gulf with many coastal facilities, such as:

1. Coastal area and islands

2. Ports

3. Fisheries and marine recreation area

These facilities are under the General Directorate of the Frontier Forces from the security point of view.

The objective of this project is to achieve more coastal security with possible less investment.

For this approach, it was decided that the contents should be in six chapters as follows:

CHAPTER ONE

FRONTIER SECURITY

It identifies the importance of the security in social, strategic and economic matters, moreover the duties and responsibilities of the Frontier Forces accordingly.

CHAPTER TWO

COASTAL SECURITY

It gives highlight to the organization of the Frontier Forces which are applied for the coastal and marine protection and the legal aspects to its authority implementation.
CHAPTER THREE

COASTAL SECURITY PROPOSAL

It introduces proposed organization of coastal security with respect to field operation taking into consideration security protection and economical aspects.

CHAPTER FOUR

PORT SECURITY AND ITS PROPOSAL

It gives briefing of the ports' advancement within a very short time and the required development to port security accordingly taking into account security protection and economical aspects.

CHAPTER FIVE

TRAINING

It deals with the training of the Frontier Forces personnel and maritime training proposal.

CHAPTER SIX

CONCLUSION

Reading of the introduction and conclusion gives broad overview of the project.

-XII-
Introduction

The Arabian Peninsula is located in the southwest part of Asia, connecting three continents - Asia, Africa and Europe. Part of this peninsula was previously under Turkish power and the other part was ruled by tribes in their own individual land.

His majesty King Abdulaziz thought a lot of uniting the Arabian Peninsula. He completed the unity of the greater part of it in 1932. This part was called "Saudi Arabia Kingdom".

Saudi Arabia has two coasts, the eastern which runs 537 km along the Arabian Gulf from Kuwait on the north to Qatar and Abu Dhabi on the south, and the western coast which runs 1,777 km along the Red Sea from Al-Aquaba in Jordan on the north to Miday in North Yemen in the south.

Since the discovery of oil in the eastern province, the economy and strategy of the country has changed and fast development in different stages has occurred creating new technology. By the end of the third five year plan, Saudi Arabia had built many modern heavy and light industries, ports, airports, highways, schools, universities, hospitals and very big cities.

Government security should follow this development.

The Frontier Forces' General Directorate is one of the security forces which was established for security control of ports, coasts, land boundaries and their entrances to prevent smuggling and illegal immigrants. The frontier forces play a vital role in the country's internal security. They carry out their duties and responsibilities well, like other security forces do. This is clearly shown by a very low amount of crime and destruction.
The choosing of this topic is just to give an idea on how to achieve more coastal security with possibly less investment, since the frontier forces are passing through different stages of development to keep continuous advancement parallel to their surroundings.

To carry out the duties and responsibilities of the coastal security need to be clarified whenever they are required to approach the objectives.

For this, the contents are divided into six chapters.

The security protection for any nation is very important socially, economically and strategically. But investments should be minimized with full consideration to security control.

This is the approaching idea of this topic –

ORGANIZATION
OF
SAUDI ARABIA

COASTAL SURVEILLANCE
CHAPTER ONE

FRONTIER SECURITY

1.1 Importance of Security

Transportation through airports, coastal and land boundaries is the most important medium from the environment and surrounding countries in social, strategic and economic matters. Consideration of legal or illegal commodities differs from one country to another. Saudi Arabia has applied the Islamic rules, accordingly some commodities which are legally used in some other countries, are considered to be prohibited and need to be controlled.

E.g.:

1. Countries allowing the use of liquor have a little bit different prices, mostly depending on demand and supply and there is no benefit of smuggling it and vice versa.

2. Drugs which are considered to be an important income for some countries are strictly prohibited in Saudi Arabia and so are the pornographic films.

Also, Saudi Arabia has a broad development in different stages which requires a huge number of foreign manpower by certain rules and regulations. Some of those who cannot comply with these rules and regulations try to get in by other means, such as,

1. Stay on regardless of their visa duration

2. Stowaways by vessels calling at Saudi ports

3. Illegal immigration through coast or land boundaries.
Moreover, the competitive industries with their new technology was a shock for the monopolists. This was an aim in order to reach a competitive reduction in several ways.

Saudi Arabia has a different approach to internal security so as to assure the best control according to the Islamic rules. This is clearly shown by the low amount of crime and destruction.

Internal security for different departments are linked with each other. If more consideration is given to the frontier and airport security, this will relieve the stress over the other internal security to avoid difficulties by the "Preventing of sickness instead of curing it".

This prevention will reduce service and security costs as well as a number of criminals. Many departments gain benefit of stress relief and cost reductions due to the specific security control on the frontier and airports, such as,

1. Departments under the General Directorate of the general security

   a) Police Directorate
      It has the power to enforce the law and control most of the internal security.

   b) Drugs Prevention Directorate
      The aim of this department is to prevent trading and using of cannabis and other kinds of drugs by chasing, tracing and enforcing the law in these aspects.
c) Prison Directorate
   Specific places where criminals serve their sentences.

2. Immigration General Directorate

   It has the power of controlling people into their entering and leaving the country and chasing those who stay on after the expiration of their visa duration. It also has to trace illegal immigrants inside the country to enforce the law in these aspects.

3. The Ministry of Health

   In this aspect, hospitals receive casualties caused by criminals and drugs effect.

The insurance cost of commodities, installations and equipment is definitely reduced when the security control is applied against theft, destruction and other matters.

The social, strategic and economic benefit of the Frontier and Airport Security will be as follows:-

1. Better use of manpower

2. Stability of internal security

3. Reduction in services and security expenses

4. Export commodities' cost reduction
   "give more competitive power"

5. Import commodities' cost reduction
   "animating of local market"

The above mentioned points are the general requirements of the
internal securities while the following points give the general aspects of the frontier security:

1. Early warning of any abnormal matter

2. Enforcement of the frontier security legislation

3. Enforcement of the pleasure and fisheries' rules and regulations

4. Marine search and rescue

5. Protection and preservation of the frontier and marine resources

6. Following up of the performance of the authorized marine scientific research

7. Information to the port authorities of marine pollution, if any

8. Dealing with marine floating bodies according to the specific rules and regulations
1.2 Duties and responsibilities of the Frontier Forces

In the last subject the important changes which occurred in social, strategic and economic matters were clearly shown. It happened because more consideration was given to the Frontier Forces and Airport Security. The Frontier Forces' General Directorate is the department which is fully responsible for the frontier security. Evaluation of these responsibilities all over the country is hardly realizable. But legislation has been made. Clarification of the authorities' responsibilities was introduced according to the following points, which show the responsibilities of the Frontier Forces:

1. Security control on frontiers and in ports to prevent smuggling as well as illegal immigrants;

2. Early warning as regards abnormal matters;

3. Marine search and rescue;

4. Guidance and assistance to be provided at the frontier area;

5. Surveillance of the frontier area;

6. Cooperation with other authorities concerning the responsibilities of the Frontier Forces.

Frontier forces should carry out their responsibilities in such a way that they cover the frontiers and ports according to the following points:

1. Obtain considerable security at the boundaries through the stations and check points which are equipped with the required facilities
2. Cooperation with military forces, internal security and other authorities concerning the responsibilities of the Frontier Forces

3. Security protection on vessels by guards shall be kept at the gangway at all times while at port berths and furthermore security observation of the territorial sea shall take place

4. Explosive's security protection to be used according to specific rules and regulations

5. Enforcement of fisheries' rules and regulations

6. Seal of vessels' liquor stores and other prohibited things according to the legislation right after health clearance

7. No person other than the pilot allowed to leave the vessel on arrival until permission has been given by the port health officer

8. Security inspections to vessels passing through the territorial sea if they are not raising their national flags and the arrest of any of them if they cannot prove their nationality

9. Inspections to ambiguous people at the frontier area if outside the Custom's yard and the assurance that if there are any illegal matters the people must surrender to the concerned authorities

10. Inspections to vessels in the territorial sea except man of war, also all land transport in the frontier area whenever required

11. The detention of smugglers, goods smuggled and transports
used for smuggling even if they run outside of boundaries towards the country.

12. Inquiry investigation of criminals and casualties onboard vessels. This is to be applied for land boundary areas if no government officer or police station is available.
CHAPTER TWO

COASTAL SECURITY

2.1 Organization

The Frontier Forces' General Directorate has been established under the name of Coast Guard Administration by the Royal decree 318/218 dated 29.01.1353 H of 13 May 1934 and accordingly legislation was introduced. The Coast Guard became responsible for the security control of the Saudi Arabian coasts, vessel services and their security, navigational aids, smuggling prevention, arrest of smugglers and illegal immigrants, assistance to marine search and rescue, developing and issuance of fishing licenses and over all enforcement of legislation of coast guard administration. In 1382 a new Royal decree was introduced in order to join both coast guard administrations in Jeddah and Dammam under "Ports, Coast Guard and Frontier Forces' General Directorate" to be responsible for a frontier security of more than 8,000 km of land and coast. By 1384 four regional headquarters had been opened in the north, south, east and west part of Saudi Arabia.

Thereafter, eight regional headquarters have been established at Jeddah, Dammam, Alwajh, Gijan, Najran, Alsulail, Alquariat and Arar.

The Frontier Forces' General Directorate was the final title decided by His Royal Highness, the Minister of Interior 1440/10 CH dated 07.07.1396 H of 04 July 1976 referring to the Royal decree 1407 dated 24.09.1395 H of 29 September 1975. Accordingly a new legislation has been made to clarify the duties and responsibilities as explained in the first Chapter.

The Frontier Forces developed through different stages parallel to the advancement of the five year plan. Changes are still taking place to reach the suitable position of development.
since the surrounding departments are in continuous development.

The organization kept changing to suit and cover the principal aim of the establishment of the Frontier Forces. Figure 1 shows the following updated organizations:

2.1.1 The Frontier Forces' General Directorate

Established under the Ministry of Interior. The General Directorate Headquarters is located in the capital of the country Riyadh. The authorities have been delegated by His Royal Highness the Minister of Interior to carry out duties and responsibilities. The central administration and management are carried out by this directorate in which organization, planning and legislation are to be handled. The Director General and his deputy are the heads of the Frontier Forces' General Directorate. They have the final delegational authority.

The following twelve departments report to the Director General:

1. Operations' Department
2. General Department
3. Officers Affairs' Department
4. Logistics' Department
5. Marine Affairs' Department
6. Financial Affairs' Department
7. Landing and Aviation Department
8. Telecommunications' Department
9. Engineering Department
10. Budget Department
11. Investigation Department
12. Tender and Contract Department
Figure 1. Organizational chart of the Frontier Forces
Each one of these departments is divided into different sections to fulfill its requirements.

The Heads of the Departments and the General Directorate Headquarters staff assist the Director General in planning, directing, coordinating and evaluating the activities carried out by the regions, districts and unit commanders with immediate directions to be provided. In addition the Director General is assisted by the staff of his office; advisers, the Military Board of Inquiry and the Directorate for Security Unit.

For the field of operations, the Frontier Forces are divided into eight regions, each of them divided into many districts and units and so on to stations or checkpoints all over the boundaries. This makes the Frontier Forces aware and alert for 24 hours a day, 7 days a week.

Since this research is for coastal protection only, clarifications will be specified for the maritime regions.

2.1.2. Maritime regions

There are four regions directly reporting to the Director General. Each maritime region's commander is assisted by his sub-department staff who is almost similar to those in the General Directorate Headquarters for Regional Plans, directing, coordinating and evaluating the activities carried out by the districts and unit commanders with immediate directions to be provided.

Regional management and administration for districts and units are done by the headquarter concerned. One of these regions is responsible for the eastern coast on the Arabian Gulf and the others are responsible for 1,777 km of the western coast on the Red Sea with 3,150 km geographical
roots for islands and coasts as follows:

1. Dammam Frontier Forces' Headquarters:

The function of this region from the Coastal point of view is to carry out the responsibilities of the Frontier Forces of 537 km along the Saudi Arabian eastern coast with 850 km geographical roots for islands and coasts. Field responsibilities are carried out through 5 regional districts, 9 units and one hovercraft establishment of the Coastal side.

2. Alwajh Frontier Forces' Headquarters:

The function of this region is to carry out the responsibilities of the Frontier Forces for the western coast on the Red Sea extending from Alaquaba of Jordan to the north of Yanbu. Field responsibilities are handled by 4 regional districts and 3 units.

3. Jeddah Frontier Forces' Headquarters:

The function of this region is to carry out the responsibilities of the Frontier Forces for the western coast on the Red Sea extending from the north of Yanbu to the north of Alquahma. Field responsibilities are handled by 5 regional districts, 7 units and one hovercraft establishment.

4. Gizan Frontier Forces' Headquarters:

The function of this region from the coastal point of view is to carry out the responsibilities of the Frontier Forces for the western coast on the Red Sea extending from the north of Alquahma to Miday in North Yemen exceeding to Farassan's islands. Field
Responsibilities are handled through 3 regional districts and 4 units of the coastal side.

2.1.3 Maritime districts

There are 17 maritime districts, five of them are located on the eastern coast and the others are in the western coast. The districts are considered as the most effective field operation to handle the coastal security for islands and coasts, as well as port security in some cases. This security control is carried out through the following different ways:

1. Surveillance of the district's territorial sea by patrol boats
2. Surveillance of the district's coast by patrol vehicles
3. Coasts and internal water surveillance by the coastal stations and checkpoints
4. Ports security units.

2.1.4 Units

According to the specific requirements, units are different to each other. The following types are introduced for this identification:

1. Security units:

   There is one specific security unit for the General Directorate Headquarters and one for each regional headquarters to handle the following major responsibilities:

   -15-
a/ Security control of the facilities concerned;

b/ The carrying out of the district's duties and responsibilities of the region concerned if not covered by any of the regional districts

c/ Regional coast patrol inspections

d/ The Directorate Security Unit to handle the patrol inspection all over the Saudi Arabian coasts and boundaries.

2. Ports security units:

There are 13 units specifically responsible for the security protection of the ports concerned. They have different duties and responsibilities as will be explained in chapter four. Some of these units report to the district concerned while the others report directly to the regional headquarters.

3. Marine units:

There are four marine units, each of them reports to the maritime region concerned. They handle the responsibilities of the Frontier Forces on the regional territorial sea and following up of the performance of the district's patrol boats.

Marine units are considered to be the most effective in the marine field operation to carry out the territorial sea surveillance, as well as marine search and rescue. All marine units report to the Marine Affairs Department regarding marine professional matters which have the following management responsibilities for the developing of the Frontier Forces' marine affairs all
over the country.

1. Purchase or build the required patrolling, training and search and rescue vessels to assure the rescue and security control on the internal and territorial sea.

2. Supply the required marine instruments and equipment.

3. Construct and facilitate the required marine workshop to maintain vessels and marine equipment and instruments.

4. Construct the required marine administration and field operation facilities.

5. Provide the new navigational charts for Saudi Arabian coasts and data collection of information.

6. Provide marine operational plans and supervision for territorial security control implementation.

7. Develop the marine organization of the Frontier Forces.

8. Prepare a marine training programme of the Frontier Forces for different levels with considerable supervision to raise qualification standards.

2.1.5 Hovercraft establishments

There are two hovercraft establishments for the territorial surveillance and marine search and rescue. These are to cover the eastern and western territorial sea. They report to the maritime region concerned. The Marine Affairs Department has the management responsibilities to develop the hovercraft establishments and its facilities.
2.1.6 **Maritime stations and checkpoints**

These are located on the coasts and islands. They report to their maritime districts. Maritime stations and checkpoints are considered perfect for field operation since they carry out the following major responsibilities:

1. Coast and internal water surveillance
2. Marine search and rescue assistance
3. Frontier security legislations enforcement
4. Fisheries rules and regulations enforcement
2.2 Coastal and Marine Protection

The Frontier Forces developed the marine security in different stages to carry out the coastal and marine protection responsibilities. Four maritime regions have been organized to cover the eastern and western coasts. Maritime regions handle their responsibilities through districts, units, stations, checkpoints and establishments. All these were developed parallel to the country's five year plans, where the surroundings are in continuous development. Since the basic mission of the Frontier Forces is to achieve security protection with the lowest possible investment, then the following points should be taken into account:

1. Enforcement of new technological development

2. Economical consideration aspect

3. More consideration to security protection

4. Consideration of the international conventions concerned.

Marine vessels are the only transportation means to be used to and from the coastal area for illegal immigrants, stowaways and smugglers. Whenever the country is able to limit and control the vessel's movement from and towards the open sea, then more and more security can be achieved.

According to this mission, the Frontier Forces made the limitatitons and control through coastal stations' and ports' security units. Stations are spread all over the coasts for the following major reasons:
1. Illegal immigrants and smuggling prevention;

2. Fisheries and recreation services and with enforcements of rules and regulations through the establishment of stations closer to their locations. All this because most of the coastal population were poor fishermen. They cannot provide their own transportation.

The spreading of stations all over the coasts was playing a vital role in economical aspects. The important aspects had been changed due to industrialization advancement. Fishing companies and other comfortable jobs with better wages attracted most of the fishermen. Others became able to provide their own transportation. The only major reason to keep these stations was because of "illegal immigrants and smuggling prevention".

Since the stations are so costly as will be shown in brief points, efficient and effective substitutions are required:

1. Fixed investments
   a) Constructions
   b) Supplying of instruments and equipment
      e.g. surplus of vehicles and boat generators, refrigerators, air conditioners, communication sets and kitchen equipment
   c) Circulation supply of new instruments and equipment after full depreciation
2) Variable investments
   a) Building maintenance
   b) Instrument and equipment maintenance
   c) Fuel consumption costs
   d) Cleaning equipment costs

3) Manpower surplus
   a) Station administration specifically
   b) Station security specifically
   c) Station service specifically
   d) Operators of the stations' generators
   e) Operators of the stations' communications

The stations are carrying out the responsibilities of the Frontier Forces through coastal and internal water surveillances. The substitutes are required to carry out the same responsibilities with the lowest possible investments.

Reduction of long term investments by the use of new technology along the districts' coastal and marine surveillances to save time as well as manpower with full consideration of security protection. This will raise the efficiency and effectiveness with considerable economical aspects.
2.3 The Legal Aspects of the Frontier Forces

Sea Surveillance

The rights and sovereignty of the coastal states are explained in the 1982 United Nations Convention on the Law of the Sea. Since the convention has not yet come into force, countries comply with the customary law and bilateral agreements. The specific right of the country regarding security control all over the coasts depends on the sovereignty in different areas, as will be briefly explained:

2.3.1 Exclusive Economic Zone (EEZ)

The zone measures 200 nautical miles beyond the breadth of the base line, but if the distance separating two countries is less than 400 n m as the ones of the Red Sea and the Arabian Gulf, then the breadth of the zone will be half the distance apart.

Generally, the coastal states have limited sovereignty over the zone as follows:

1) All ships have full navigational right with observation of safety zones

2) Ships have the right of laying cables and pipelines

3) All marine resources are property of the coastal states

4) Coastal states have the right to establishing installations, structures and artificial islands if they are not interfering with navigation

5) Coastal states have the right of protection and preservation of the marine environment
6) Coastal states have the right of arrangement of marine scientific research

7) Fishing vessels may have access to the available surplus catch determined by the coastal states

8) State of origin shall ensure anadromous stock conservation

9) Fishing vessels shall comply with licensing of vessels, equipment and fishermen, as well as determine the species and regulating seasons and fishing areas

10) Coastal states may take boarding, inspection and arrest measures, as well as judicial proceeding and penalties for violation of fisheries legislation.

The security control of Saudi Arabia's Exclusive Economic Zone (EEZ) is under the responsibilities of the Ministry of Defence.

Since the breadth of the Red Sea and the Arabian Gulf is less than 400 n m and accordingly the breadth of the exclusive economic zone will be half the distance apart. Thus, Saudi Arabia is recognized as a country without open sea. Therefore the exclusive economic zone never extends even if there are some natural islands.

2.3.2 Territorial Sea

The zone measures 12 n m beyond the breadth of the base lines, but if the distances separating two countries are less than 24 n m then the breadth of the zone will be half the distance apart.

Even air space, sea bed, subsoil and marine resources except to provide the right of innocent passage for all ships is completely under sovereignty of the coastal states.
Some states ask for clarification of war ships.

The Royal Decree No 33 dated 27.07.1377 H of 16 February 1958 established the extension of the territorial sea to 12 nautical miles beyond the breadth of the base lines and 6 nautical miles contiguos zone beyond the territorial sea.

This zone is under the responsibilities of the Frontier Forces from the security point of view as mentioned in Chapter One.

2.3.3 Contiguous zone

According to the Law of the Sea Convention the zone measured 24 nautical miles beyond the breadth of the base lines. This extension is necessary to regulate security, navigation, customs, fiscal, immigration and health matters.

2.3.4 Internal water

The water before the base lines is completely under sovereignty of the coastal states. So is air space, sea bed, subsoil and marine resources. All aircraft, vessel and submarine movement should be under the control of the coastal states. Security of this zone under the responsibility of the Frontier Forces.

2.3.5 Ports

Ports play a very important role for the economy and development of the country. Ports are considered as the stations of transportation with a worldwide link. Most of the country's import and export are carried out by seaborne trade and handled in the ports. Some pilgrims and passengers are travelling overseas, using the ports during their passage. Efficiency and effectiveness of the ports may rise with the following considerations:

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1. Introduction of containerization and port development technologies with sufficient port facilities. Ports should be managed and handled by qualified and skilled personnel.

2. More consideration for port security protection with the lowest possible investment. This prevents smuggling, illegal immigrants, theft, destruction and crimes which reduce the insurance costs and thus, give more confidence to the port users.

The functions of the responsibilities of the Frontier Forces for port security are different from other responsibilities. Many employees, workers and agent are working within the ports. They require special treatment for continuous passages of their ports to avoid delay and to assure the security control of the Port. For the consideration of port security, the Frontier Forces play a very important role.

2.3.6 Small scale fisheries

Since long most of the coastal population was working in the fishing business. Cities, towns and villages were located around the natural harbours. The Government spread stations of the Frontier Forces along the coasts. These stations were established closer to the locations for fisheries and recreation services and coastal security. The spreading of these stations reduced the transportation difficulties of the fisheries.

Nowadays, after the advanced development all over the country, new easier jobs with higher wages have been created. Roads and transportation became available. Regular fishing companies equipped with new technological facilities have been established. Most of the fisheries left their fishing field to
the regular fishing companies or to the new jobs created. These companies are equipped with the latest new technological facilities. They can easily be directed to suitable fishing harbours and fishing areas to obtain maximum economical yield. The enforcement of the frontier security legislation will be complied with easier than the individual fisheries. The few fishermen remaining in their field were able to provide their own transportation due to the rise of their income level.

2.3.7 Recreation areas

All Saudi Arabian coastal areas are open for recreation if vessels are not involved and if there are no special restrictions. The duties and responsibilities of the Frontier Forces are to provide rescue service and to advise the people how to avoid dangerous places. Fishing vessels and recreation crafts are to be treated as under the legislation. These vessels should leave and go back to and from the stations of the Frontier Forces all over the coasts. The geographical nature of some parts on the coasts attract people. These become more attractive when their locations are closer to large cities. According to government plans, many recreation areas were developed to refresh the pleasure abilities and efficiencies. The Frontier Forces are always present at the spot (stations) located in strategic places. Search and rescue and coastal control are the major responsibilities.

2.3.8 Islands

The islands are of the following two types:-

a) Natural islands

These are of geographical nature. The right and sovereignty of the coastal states are according to the customary law recognized as the same as for the coastal

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areas. The islands have the right to internal waters, territorial sea and exclusive economic zone if not conflicting with the right and sovereignty of other coastal states. This may extend to the exclusive economic zone and as a result more marine resources will be achieved. Some of these islands might be used for an early warning defence. The Natural islands play a very strategic and economic role for the Coastal states. Some of these islands have a large population, such as the "Farassan's islands" in Saudi Arabia and therefore need more security control consideration. People who leave the coastal states to their islands or vice versa are considered as on local passage while practically they are passing through the open sea. This may be misused and create a lot of security problems. The security control applied for the Saudi Arabian islands is the same as that for the eastern and western coasts of the country.

b) Artificial islands

These are manmade islands normally established by the coastal states for strategic or vital construction purposes like that on the King Fahad Bridge which connects Saudi Arabia with the state of Bahrain. According to the customary law the coastal states have the right to establish artificial islands if they are not interfering with navigation. These establishments are permitted at internal waters, territorial sea and the exclusive economic zone. Artificial islands have no right to internal waters, the territorial sea or the exclusive economic zone but navigationally all vessels should keep 500 metres as safety zones.
2.3.9 King Fahad Bridge

The twenty-five kilometre bridge connects Saudi Arabia with the state of Bahrain. The bridge is considered as a land port. Dammam Frontier Forces play a very important role in the security protection of the bridge.

2.3.10 Bilateral Agreements

Saudi Arabia signed six different bilateral agreements with the following countries to ensure the right of each state:

1. Saudi Arabia – Bahrain Agreement of 22 February 1958

2. Saudi Arabia – Qatar Agreement of 27 June 1965

3. Saudi Arabia – Kuwait Agreement of 07 July 1965

4. Saudi Arabia – Iran Agreement of 24 October 1968


CHAPTER THREE

COASTAL SECURITY PROPOSAL

3.1 Field operation

The Frontier Forces developed through different stages parallel to the advancement of the five year plans. New technology changes developed all over the country. As a part of these developments the Frontier Forces need to consider the following requirements for future planning:

1. The Security protection

2. The Economic aspects

Duties and responsibilities of many stations and departments may be delegated to some other departments or carried out by new technologies. Investment reductions of facilities and manpower can be obtained by a

"Combination of responsibilities and delegation of authority to suitable organizations".

The spreading of responsibilities over many small departments requires more administrative and professional manpower, and also an increase of fixed and variable investments. In order to consider this, the combination of some departments is required. Stations should be alternatively exchanged by new technologies and security control should be taken into account. As a result of these combinations and exchanges the following field organization may be applied:

1. Maritime districts

2. Ports security units
3. Naval training centres


These combinations and alternative exchanges shown in the organization Figure 2 should be capable of carrying out responsibilities of the Frontier-Forces all over the coasts as to be briefly explained:
Figure 2. Proposed organizational chart of the Coastal area of the Frontier Forces
3.1.1 Maritime districts

These districts are the most efficient and effective departments to carry out field operation responsibilities of the coastal security on the coasts, islands and sometimes ports security. Maritime districts cover their areas through the following activities:

1. Marine surveillance

2. Coastal surveillance

3. Short range marine and coastal surveillance which is carried out through maritime station field operations

4. Supervision of port security units which are located within the district's limitations

5. The operation rooms which are considered to be the heart of the districts.

In the past the districts were far away from development locations. They faced the following difficulties:

1. Shortage of qualified and skilled personnel

2. Roads and transportation links

3. Communications with the General Directorate Headquarters

4. Maintaining of logistics from local or nearby markets.

Connection with maritime regions was the suitable solution to overcome these difficulties. The maritime region's headquarters were located in a considerable development. Thus the region's headquarters play a vital role for the supervision and
connection links between the districts and the General Directorate Headquarters. Although the following briefly shows difficulties which the districts were faced with

1. Centralization of purchase

2. Difficulties of payment to the district's manpower

3. Delay of letters and documents handling between the districts and the General Directorate Headquarters

4. Information delay between the districts and the General Directorate Headquarters

5. Region's Headquarters take most of the consideration

6. Centralized Board of Inquiry, delays the investigations and decisions.

According to the fast development all over the country, the district areas developed and their situation changed, such as the following developments concerned

1. More qualified and skilled personnel enrolled under the maritime districts

2. Road constructions and availability of transportation

3. Availability of all types of communication

4. Availability of the districts' requirements at local or nearby markets

Since the maritime districts became able to maintain and provide their requirements easily there are no major benefits to keep the maritime regions in the middle of the districts and
the General Directorate Headquarters. Additions of only financial sections to each of the maritime districts are required to fulfill their organizations. The following advantages are to be achieved when the districts concerned are directly connected to the General Directorate Headquarters:

1. Saving of administrative and professional manpower of the maritime regions' headquarters and other units

2. More field power on the spot for law enforcement and quick decision making

3. Faster letter and document handling between the districts and the General Directorate Headquarters

4. Faster circulation of information:

5. Making the General Directorate Headquarters staff more close to the field operations

6. Minimizing the difficulties of the payment procedures

7. Avoidance of the following difficulties of purchasing equipment, instruments and spare parts

   a) delay of supply

   b) sometimes mislead of supplying the requirements

The districts may appoint the following sections to be members of the purchasing committee:

I) logistic section

II) financial section
III) one of the required maintenance sections, such as,

- Mobile workshop maintenance
- Marine workshop maintenance
- Constructions maintenance

IV) the order obtaining section
"The district commander should choose a member if the orders are generally obtained"  

8. Avoidance of the decision conflict

9. Each district has its own specific operation field to be considered according to its local situation

10. After all these developments, there are no major benefit for the districts to go through regional maritime headquarters.

It is necessary for the districts to report directly to the General Directorate Headquarters and carry out their responsibilities through the following activities:

1. Links of unmanned coastal radars "fitted with mobile target indicators" connected to the main operation room

2. Coastal surveillance section

3. Marine surveillance section

4. Main operation room connected to the operation section. It works as field operation control and to be recognized as marine sub-rescue coordination centre (MSRCC)

5. Supervision of port security units "if available"
6. Maritime stations
   To carry out short range coastal and marine surveillance

7. Training centres
   To insure skilled personnel provided.

"if required"

The strategic places of the districts are required for long run investment reductions and better use of manpower. These places should be sufficient for a combination. Port security units and training centres are excluded from these combinations due to their specific implementation. The choosing of strategic places depends on the services and responsibilities of the districts. All the districts which are responsible for the important coastal construction security, require intermediate locations to provide their services and law enforcement, while choosing the suitable inlet for the other districts to build their facilities and providing the districts, fisheries and recreation boats berthing to be located as follows:

1. Closer to cities, towns and villages

2. At the inlet edges towards the open sea to enforce the law and provide services for pleasure and fisheries

By choosing of strategic places of maritime districts with sufficient facilities closer to their required services, will provide comfortability for pleasure and fisheries. There will be no security restrictions for the inlet’s internal water. The districts pay only services and marine search and rescue by short range vehicles and boat surveillance. Registrations and security restrictions are applied for those who leave the inlet for the open sea. The districts cover their own areas by long and medium range vehicles and boat surveillance. Those who have left the inlet for the open sea will be covered under the districts' security and service. Many are considering that the investments on the strategic constructions never serve the
economical aspects. They may think of the short run investments regardless of the other long run investments accordingly. Perhaps the costly constructions may be avoided in other continuous investments and provide more benefit in the long run. A combination of responsibilities within the districts will serve the economical aspects of the country in the long run and provide better use of manpower. To cover some of the capital costs, unrequired real estate should be sold. This will serve the following aspects:

1. To escape maintenance costs

2. To use the cash flow for the strategic constructions

3. To give chances to those who prefer to use it.

It is very difficult to find strategic places in the large cities. Jeddah is an example. The best place for a maritime district in Jeddah is located on the "Sherm Aubhur" edge towards the open sea. Sherm Aubhur is the best recreational area in Jeddah; marine recreation crafts can be used but no sufficient vacancies are available for the district place. These problems are not common, they just appear in one or two cities only. Thus, paying compensation to the real estate owners to vacate the required places is the best solution. Cash flow may be obtained from the sale of unrequired real estate.

Each district has a main operation room which plays a vital role in collecting the information and in directing all coastal and marine patrolling craft. The receiving of the distress signals and directing of the nearest patrolling craft is to provide rescue assistance. The main operation rooms at the districts may be considered as marine sub-rescue coordination centres (MSRCC) and will be connected to the main operation room at the General Directorate Headquarters which may be considered as rescue coordination centre (RCC).

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Each port security unit has its own operation room and is to be considered as the branch of the district concerned.

The main principle of a combination of responsibilities to districts are based on the districts themselves. The districts are capable of carrying out these responsibilities through their marine and coastal surveillances and other technological facilities in which they cover the territorial sea, internal waters and coastal area.

The following responsibilities will be covered from very close locations:

1. Early warning for any abnormal matter

2. Illegal immigrants and smuggling prevention

3. Marine search and rescue

4. Pleasure and fisheries' services

5. Frontier security legislation enforcement


Marine units are covering their responsibilities through the marine patrolling crafts. The maritime districts are doing the same with more specific concentration of the area. Thus a combination of marine units to the district responsibilities should be obtained.

Nineteen maritime districts are sufficient to cover the eastern and western coasts in which only two maritime districts at Alwajh and Gizen are to be included, while four maritime
regional headquarters, eight units and two hovercraft establishments are to be excluded. The maritime districts are to be categorized according to their manpower organizations. Figure 3 shows briefly the proposed organization chart of the maritime districts.

Establishing of military board of inquiry in the maritime districts is very important and has never cost the Frontier Forces any investment.

The Military Board of Inquiry consists of:

1. Assistance to the maritime district commander to be in charge of the board

2. All the heads of the maritime district sections form the members of the board

The personnel section of the maritime districts takes care of all the arrangements and assures that the Military Board of Inquiry meets twice a month during working hours.

As the maritime districts carry out their responsibilities of marine casualties they need to form the Marine Board of Inquiry with their investigators as follows:

1. Investigators

   The officers of the following operation sections are to be considered as casualty investigators due to their experience in this field

   a) Port security units

   b) Marine surveillance

   c) Coastal surveillance
Figure 3. Proposed organizational chart of Maritime Districts

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E1  E2  E3  E4  E5  E6  E7  E8  E9  E10

F1  F2  F3
2. Inquiries

The Marine Board of Inquiry consists of the following experts who study the papers so as to obtain considerable decision on the spot.

a) Assistance of the maritime district commander is to be in charge of the board.

b) The heads of the operation section of the district, port security units, marine surveillance and coastal surveillance are to be members of the board.

The operation section of the maritime districts takes care of all the arrangements and assures that the Marine Board of Inquiry meets for casualties.

3.1.2 Port security units:

The Frontier Forces play a very important economic role in the country by carrying out its responsibilities regarding port security. This role is different from the one applied on the territorial sea, internal waters and coastal areas because of the difference in aims. Most of the country's import and export are carried out through the ports. Vessels of different size with cargo handling, pilgrims and passengers are using the ports. Many employees, workers, authorities concerned and company representatives are always in continuous port movements. A special deal of port security is required. Port security should be obtained by special independent security for its field operations under supervision of their districts. These are the "port security units" under supervision of their districts as applied at "Yanbu district".

More details on port security will be shown in Chapter Four.
3.1.3 Naval training centres:

Manpower is the most important element to run, maintain and supervise the work of all equipment, instruments, installations and other facilities. Training plays a very important role to obtain well qualified and skilled persons. More consideration should be given to the training centres to maintain high training standard. They should have their own independent organization under supervision of their districts. More details in this subject will be explained in Chapter Five.

3.1.4 Maritime stations:

Marine vessels are the only type of transportation that can be of use for smugglers and illegal instruments through the coasts. Whenever the country is able to limit and control the vessels' movements to and from the open sea then more security can be achieved. Accordingly, the Frontier Forces create the limitation and control through port security units and maritime stations. The Frontier Forces are therefore spread in maritime stations all over the coasts for illegal immigration and smuggling prevention, also for the pleasure and fisheries' services and law enforcement. The stations are established closer to the fisheries' locations to provide services and to avoid transportation difficulties. The stations were playing a very important role on the economical aspects of the country. Also they act as Controllers of the operation field of the Frontier Forces. Now most of the fishermen left their field to new easier jobs with a higher income, others can provide their own transport. Most of the stations now are not economically profitable, which means that the value of services obtained by the stations are less than the actual investments of the stations.

The only major reason for keeping the stations is "smuggling and illegal immigration prevention", since the stations are
very costly in their fixed and variable investments. Reasonable alternatives are required for the exchange of the stations. Unmanned coastal radars fitted with "M.T.I." reduce the long run investments and direct the main operation rooms of the coastal movements, also assist the radars fitted on the marine patrol boats. Moreover, the marine and coastal patrol crafts carry out their surveillances from one district to the other. Since the marine vessels are the only transportation to be used for smuggling and illegal immigrants and since their speed is very slow compared to other kinds of transport. Thus coastal radars in cooperation with the districts, marine and coastal surveillance is the best alternative for the marine stations. The security protection will be more considerable and difficult to avoid.

Coastal radars offer more accuracy in the following points:

1. Early warning for any abnormal matter

2. Giving the exact positions of the craft carrying smugglers and illegal immigrants

3. Providing the accurate operation policy to patrol crafts

These alternatives save manpower and reduce the long run investments.

Case study:

This case study shows an example of manpower saving when the alternative exchange of the stations is applied.

With the consideration of 40 working hours per week the Frontier Forces require eight hundred vehicle drivers for the marine station coastal patrol only. The number is reduced to three hundred drivers for the coastal patrol of the marine
districts when coastal radars have been used as the alternative exchange.

Other manpower differences can be calculated in a similar way.

The policy options for the actual surplus would include the following:

1. Using some of them in field operations

2. Training some of them for technical maintenance, such as
   a) electricity     b) mechanical     c) welding
   d) denting         e) painting        f) lather machine
   g) some other workshop maintenance

3. Using some of them in other organizations

4. Early retirement

5. Carrying surplus until natural waste reduce the number

As in the previous explanation of the stations' high investments and manpower consumption, the combination of the stations' responsibilities to their districts is the best solution. The districts carry out these responsibilities as previously explained.

Maritime stations may remain or be established by need, due to social affairs or economical aspects with respect to the pleasure or fisheries.

These stations carry out the following limited responsibilities.

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1. Pleasure and fisheries' services

2. Marine search and rescue

3. Enforcement of pleasure and fisheries rules and regulations

4. Frontier security legislation enforcement.

The combination of most of the responsibilities to the districts using technological alternatives and strategic places will save the manpower and reduce the long run investments. These are the only reasons for requiring such combination.
3.2 The Main Surveillance Characteristics of the Maritime Districts

3.2.1 Coastal Surveillance

These are vehicle patrolling crafts. Their aims are to carry out the responsibilities of the Frontier Forces throughout the maritime district concerned, with the exception of short ranges surveillance which has special requirements. They are always in connection with the operation room of their own district. Coastal surveillance is of the following different types:

A) Coastal surveillance supervision.

This is irregular surveillance. The following responsibilities are carried out by qualified persons:

1. To follow up the concerned medium and short range coastal surveillance
2. To follow up the work procedures for the concerned port security units and maritime stations.

B) Medium ranges coastal surveillances:

This is regular surveillances. It is considered as the main field coastal surveillance under the main operation room directions.

The following responsibilities are to be carried out:

1. Early warning of any abnormal matter
2. Illegal immigrants and smuggling prevention
3. Prevention of illegal coastal constructions
4. Provision of the required assistance within its ability

5. Immediate information to the main operation room and then the surrender of any of the following arrested situations to their own maritime districts as soon as possible

   I) Illegal immigrants

   II) Smugglers, things smuggled and smuggling crafts.

The medium range coastal surveillance plays a very important role for the coastal security protection. The following procedures should be established to ensure the accuracy and availability throughout the patrolling circulations:

1. The following up of coastal surveillance supervision

2. Continuous communication connection with their operation room

3. Using of "watchman's clock"
   It can be put at different suitable places within the coasts to enforce registration of the coastal surveillance passage. The features of these clocks are:

   I) easy to handle
   II) accurate
   III) not costly

C) Short range coastal surveillance:
This is special regular surveillance. It has some of the following limited responsibilities according to the situation requirements:

1. Provision of services and advice at the recreation areas

2. Prevention of illegal coastal constructions

3. Outside survey of the external vital coastal construction fencing.
3.2.2 Marine surveillances

Different sizes of patrol boats are required to carry out the responsibilities of the Frontier Forces throughout the maritime territorial sea and internal waters concerned. They are in continuous communication with the main operation room at their own districts. They exchange information with the operation room to ensure the cooperation of their radar and the coastal radar. This is regular surveillances of the following types:

A) Long range marine surveillance

This type is meant for the territorial sea surveillance. It works together with the maritime districts which are responsible for:

I. The vital coastal and marine constructions or,

II. The islands which are beyond the territorial sea

Long range patrol boats are suitable for carrying out the following responsibilities for the important strategic constructions of the area:

1. Early warning for any abnormal matters

2. Enforcement of Frontier Security Legislation

3. Enforcement of Pleasure and fisheries' rules and regulations

4. Marine search and rescue

5. Protection and preservation of marine resources
6. Following-up of the performance of the authorized marine scientific research

7. Immediate information for marine pollution detection

8. The dealing with marine floating bodies according to their specific rules and regulations

B) Medium range marine surveillance

This type of marine surveillance is meant for the territorial sea and internal waters surveillance. They carry out similar responsibilities to the long range marine surveillance with the exception of those beyond the territorial sea

C) Short range marine surveillance

This type is meant for the internal water surveillance. It is employed according to the specific requirements and accordingly it carries out the following responsibilities:

1. Security protection for their districts' marine vessels and facilities

2. Marine search and rescue
   "with special consideration to recreation areas"

3. Prevention of illegal contact of marine vessels

4. Enforcement of Frontier Security Legislation

This type of surveillance is for specific responsibilities at the appointed areas only. Otherwise, if no limitation it could not carry out duties properly.
3.2.3 The major general requirements of marine patrol craft:

Marine vessels play a very important role by providing the following activities of the Frontier Forces:

1. Marine surveillance

2. Marine search and rescue

3. Marine assistance

4. Marine fire fighting

The choosing of special vessels for each of these activities will never obtain the required services at time of need. Search and rescue boats are normally far away from the casualties and have difficulties to provide assistance.

A comparison can be made with the Canadian Coast Guard. They have had one search and rescue boat for two years, located in Halifax. Many casualties are reported but this boat never provided any rescue. All rescue operations are carried out by the field marine patrol craft.

The major disadvantages of obtaining specialized search and rescue or fire fighting boats are:

1. Their crew is working around the clock waiting for casualties only

2. These boats are far away "normally" from the casualties and it is difficult to provide assistance

3. High capital costs to purchase and more investments to maintain.
All these activities can be comprised and carried out by the following required multipurpose vessels:

1. Long range patrol boats

2. Medium range patrol boats

3. Short range patrol boats

These boats are fitted with fire fighting and search and rescue equipment. They carry out patrol surveillance according to their programmes. Whenever casualties are reported the operation room will direct the nearest patrol boats for the required rescue. According to this procedure fewer vessels and manpower are required. Moreover, unification of manufacturing of vessels, instruments, equipment and other marine facilities will result in the following benefits:

1. Easier provision of spare parts

2. Reduction of spare parts stock

3. Maintenance easier to carry out

4. Quick training to manpower

5. More expertise can be achieved

6. Exchange of professional manpower

7. Fewer vessels and manpower required

The Saudi Ports Authority made the qualified experiment when the unification of instruments, equipment and some other port facilities were applied. They obtained the best use of manpower and positive results as regards economical aspects. The stock
was reduced and the standard of maintenance was raised. Long and medium range patrol boats should be provided by service boats to be used in shallow water to avoid manoeuvring difficulties.

The Frontier Forces have the following types of vessels:

1. Long, medium and short range marine patrol boats
2. Search and rescue and fire fighting boats
3. Fuel and water tankers
4. Training ship
5. Hovercraft
6. Yachts
7. Tugs
8. Landing craft
9. Ferries

There are three ferries for transportation between Gizan and Farassan's island.

More information in this regard is established in "Jone's fighting ships 1985 - 86" and "Navy International, vol. 93 No 4, April 1988 which was published by Maritime World Limited".

The obtaining of sufficient boats will reduce the costs and investments for the long run and give the opportunity for maintenance. These boats will carry out their duties and responsibilities properly and will serve for a long period.
Also, the providing of fixed crew for each vessel will maintain the boat situation.

If the supply is not sufficient then the following facilities will occur:

1. More operational stress over the limited number of vessels
2. Difficulties in maintenance
3. Circulation of manpower at limited quantity
4. Shortage of age due to operational stress, circulation of manpower and maintenance difficulties
5. Lack of carrying out duties and responsibilities due to bad conditions of the boats
6. Circulation of exchange of bad condition boats by new boats
7. Capital costs changing, "normally" to higher rates
8. Difficulty to provide the previous boats similar types.

This shows the importance of the quantity as well as the quality of vessels, equipment, instruments and even manpower. It will also introduce the maintenance difficulties.
CHAPTER FOUR

PORT SECURITY AND ITS PROPOSAL

4.1 General introduction to ports development

Ports play a very important role for the country's economy. This was recognized by the commencement of the first national development plan in 1970. A great increase of imports took place to fulfill the requirements of the five year plan development with concentration of the infrastructure of ports and industries. The Saudi Ports Authority was established by the Royal Decree M/65 dated 1.9.1396 H of 26 August 1976 to carry out operation and development responsibilities of Saudi ports. Since then, the Saudi Ports Authority achieved a wide range of developments by extending, modernizing and upgrading the operational efficiency. The government has implemented many constructions and development projects. As a result, there has been a five-fold increase in the number of operational berths from 37 in 1976 to 168 in 1986. The Saudi ports were capable by 1986 of handling the increased volume of imports and exports amounting to 60 million metric tonnes (excluding crude oil). Within the short period Saudi ports were ranked among the most famous ports in the "state of the art" cargo handling equipment, the development of specified berths and the use of computer applications in all operations.

They are pioneers in some specialized fields, such as the handling of bulk and live stock. Containerization and RoRo techniques have been established. Sophisticated facilities have been used for this purpose, such as yards, mechanical handling equipment and electronic data processing.

Direct cargo handling costs of one ton was reduced from 36 Saudi Ryals (USD 9.6) in 1980 to 14 Saudi Ryals (USD 3.7) in 1983 due to the ports development. The Saudi Ports Authority
introduced several pioneer developments such as the standardization of loading and unloading operations and unitization of cargo handling equipment and other facilities. By 1986, the Saudi Port Authority was able to finance its own operations and project expenditures and transfer the surplus revenues to the Ministry of Finance and National Economy. Their services to the national economy exceeded the traditional activities, such as cargo handling, pilotage, provision of yards, warehouses and safe navigational channels to support the private sector and the development of the commercial activities in the kingdom. More than 12,000 vessels call at Saudi ports annually. The major aims of the Saudi ports development for the national economy are to establish the required projects, as listed below:

1. To import infrastructure material for general constructions all over the country

2. To import equipment, instruments and spare parts

3. To import food, meat and live animals

4. To import clothing, medicines and local market requirements

5. To export crude oil

6. To export oil products

7. To export basic products for light industries

8. To export grain and wheat

9. To export other national products
In Saudi Arabia there are two types of civilian ports, namely

1. major ports

2. minor ports.

The following seven major ports are capable of cargo handling imports and exports of commodities with sufficiently shaded and open storage areas:

4.1.1 Jeddah Islamic Port

This is the largest port in the Middle East, located at the western coast of Saudi Arabia in Jeddah. It receives half of the Saudi imported commodities and 85% of the food stuff. It is recognized as the world's largest port of handling live animals. Of the pilgrims 75% are using the port. More than 6,000 vessels call at the port to come alongside the 51 berths which can handle 23,06 million tonnes annually. By the end of 1985 the port had 49 shaded stores with a total area of 342,000 square metres and open stores with a total area of 2.8 million square metres. The port is computerized, equipped with the latest modern cargo handling. It handles the bulk cargo of 96,000 tonnes cement and 120,000 tonnes grain. There is one complex for ship repair and maintenance in the port, which includes the main floating dock for the repair of ships up to 45,000 tonnes in addition to a smaller dock for the repair of ships up to 16,000 tonnes. There is about 11,000 men working in close relation with the port (excluding the other government employees and the private sector). The cargo handling activities for 1986 were: Imports 14,955,206 and exports 935,510 in metric tonnes.

4.1.2 King Abdul Aziz Port

This is the second largest port of Saudi Arabia located in
Dammam of the eastern province. More than 4,000 vessels call at the port to come alongside the 39 berths which can handle 15.9 million tonnes annually. The port is equipped with modern cargo handling equipment and with sufficient storage facilities. There is one complex for ship repair and maintenance in the port which includes two floating docks. The first is for repairing large vessels up to 62,000 tonnes, the second for repairing the smaller vessels up to 35,000 tonnes. There are about 9,000 men working in close relation with the port (excluding other government employees and the private sector). The cargo handling activities for 1986 were: Imports 5,897,297 and exports 1,209,934 in metric tonnes.

4.1.3 King Fahad Industrial Port, Yanbu

This port was developed parallel to the Yanbu industrial city which was established in 1977. Most of the infrastructure material and equipment of Yanbu industrial city was imported through the construction support terminal. This was a temporary terminal till 1982 when King Fahad Industrial Port was ready to receive general cargo vessels, containers and RoRo vessels. There are 22 berths spread over 12 kilometres of the coastline. These berths form seven specialized terminals to receive 1,200 vessels annually for imports and exports of general cargo, crude oil, oil products and basic products for the light industries. There is modern cargo handling equipment with sufficient storage facilities. It has special marine service facilities at the service harbour and the latest modern equipment for marine pollution prevention. The cargo handling activities for 1986 were: Imports 22,965 and exports 18,038,100 in metric tonnes (excluding crude oil).

4.1.4 King Fahad Industrial Port, Jubail:

This port was established in 1975 parallel to the industrial city of Jubail. It was meant for imports and exports of general
cargo, oil products, other industrial products and the basic product for light industries through 16 berths. By 1985 this port handled 3.8 million tonnes exported commodities and 3.3 million imported commodities. It has the latest modern equipment for marine pollution prevention and expertise in this regard. The cargo handling activities for 1986 were: imports 1,928,288 and exports 12,015,360 in metric tonnes. The future plan of this port is to be facilitated by 1990 to handle 35 million tonnes annually.

4.1.5 Jubail Commercial Port

This was an old port, developed parallel to the five year plan of the country. More than 1,500 vessels call at the port to come alongside the 16 berths, which can handle 5.52 million tonnes annually. This port is independent of the industrial port. There are about 3,000 men working in close relation with the port (excluding other government employees and the private sector). The cargo handling activities for 1986 were: imports 1,345,661 and exports 343,515 in metric tonnes.

4.1.6 Gizan Port

This is recognized as the fourth largest port on the western coast of Saudi Arabia. There are 12 berths which can handle 2.57 million tonnes annually. This port has the cargo handling facilities with sufficient storage areas to serve the southwestern region of the kingdom. There are about 1,000 men working in close relation with the port (excluding the other government employees and the private sector). The cargo handling activities for 1986 were: imports 674,548 and exports 106 in metric tonnes.

4.1.7 Yanbu Commercial Port

This was an old port at Yanbu and was the second largest port
on the western coast of Saudi Arabia before the construction of the King Fahad Industrial Port at Yanbu. More than 400 vessels call at the port to come alongside the 11 berths which can handle 3.5 million tonnes. This port has the cargo handling facilities with sufficient storage areas and also a bulk cement industry. There are about 1,400 men working in close relation with the port (excluding other government employees and the private sector). The cargo handling activities for 1986 were: imports 2,262,586 and exports 1,702 in metric tonnes.

All these ports are equipped with different types and sizes of vessels for:

1. Pilot service
2. Search and rescue
3. Fire fighting
4. Pollution prevention
5. Garbage service
6. Maintenance service for navigational aids

In addition to these ports there are 19 minor ports serving local areas. The Saudi Ports Authority plays a very important role for the development and regeneration of the minor ports, namely:

1. Service of the fishing sectors,
2. Coastal transport, and
3. Facilitating development in the hinterlands of these minor ports.
The establishment of the following fishing ports and berths is the most important achievement in this field:

1. Jubail Fishing Port

2. Darin Fishing Port

3. Dammam fishing vessel berths

4. Gizan fishing vessel berths

5. Diba fishing vessel berths

6. Studies and design for the establishment of a fishing berth in Al-Qatif.

In 1985 work began for the establishment of Diba Port on the Red Sea to be one of the Saudi major ports to serve the northwestern region of the kingdom.

Regarding the legal aspects, the Saudi ports are to be conformed officially by obtaining the following points:

1. Ready berths for receiving cargo vessels

2. Conform measured custom yards by the Ministry of Finance and national economy's decision

3. Security fence around the custom yard

This briefing of the ports development shows a big transfer of port advancement within a very short time. Port security requires to be in parallel development with these ports to assure full consideration of the security control.
4.2 Port Security

The development of port security depends on the development of the port. Port security passes quickly through different stages of development. The Frontier Forces' General Directorate is actually responsible for the "vessels' security" according to their legislation. The port security units were established by His Royal Highness The Minister of Interior, Decree 4/5/C dated 14.05.1390 H of 17 July 1970 to be under the supervision of the General Directorate of the General Security. Each port had the following two types of security:

1. Vessel security units
   belonging to the Frontier Forces' General Directorate

2. Port security units
   belonging to the General Directorate of the General Security

Enumeration of security measures for each port had several difficulties. Studies had been made to combine both security forces to achieve:

1. Identification of liabilities

2. Avoidance of conflict of responsibilities

3. Saving of manpower, especially in administration

4. Cost reduction on the following:-
   a) construction
   b) instruments and equipment
   c) documents and stationery
d) service and maintenance

e) other facilities

5. Harmonizing of the procedures

Accordingly, after the finalizing of these studies, both security forces were combined to "Port Security Units" by His Royal Highness the Minister of Interior, Decree 2C/7074 dated 26.06.1399 H of 23 May 1979 in which the following responsibilities of port security were delegated to the Frontier Forces:-

1. Security investigation through the gates with the cooperation of Customs and Ports representatives

2. Ensure that the cargo passing through the gates have the official release

3. Regulate the passage of those who have jobs requiring them to enter and leave the ports through identification

4. Security protection to all

   a) constructions

   b) berths

   c) open storage areas

   d) shaded storage places, "after working hours only"

5. Patrolling surveillance inside the ports around the clock including the open and shaded storage areas, constructions, gates, passages and around the fences

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6. Cooperation with the Immigration regarding passengers entering and leaving ports and vessels

7. Issuing of the permanent and temporary ports entry permits for the port workers as required

8. Strict prevention of unrequired traffic in certain areas, such as
   a) cargo handling
   b) open and shaded storage areas
   c) other specified areas

9. Observation of cargo handling inside the ports to ensure of no negligence

10. Represent as a member of the Investigation Committees for cargo losses, damages and general average

11. Represent as a member of the Customs Board of Inquiries

12. Traffic organization inside the ports

13. Full organization of the ports security protection

14. Inform the higher authority in case of negligence of
   a) cargo handling operations
   b) cargo storage
   c) cleaning and maintenance of all port facilities
   d) financing or security
15. Prevention of smuggling, stowaways and illegal immigrants

16. Security protection to all vessels which are alongside the ports berths and keep observation of those who are sailing in the port area

17. After health clearance, collection of all prohibitid goods to be stored and sealed in the vessels' stores

18. No person may leave or board a vessel on arrival other than the pilot, until permission has been given by the port health officer

19. Security inspection of vessels passing through the port area if they are not raising their national flags and arrest any if they cannot prove their nationality

20. Security inspection to all vessels other than military whenever required

21. Inspection, investigation and arrest of smugglers, goods smuggled and transports used for smuggling in the port area

22. Carrying out of investigation of all marine crimes in the port area if no governor or police stations are available. The criminals arrested should surrender to the nearest governor or police station within 24 hours

23. Assistance in marine search and rescue within the port area

24. Information to the Port Authority whenever there is detection of marine pollution

25. Marine floating bodies according to the specific rules and regulations should be dealt with
26. Arrest any violator of the frontier security legislation after implementation of the required procedures

27. Cooperation with other authorities is required according to the government rules and regulations and the frontier security legislation.

Each port has its own specific operation field to be considered according to its size and cargo handling, e.g.

Never compare the Jeddah Islamic Port with the minor ports. Also, never compare oil or industrial ports with general cargo ports.

These ports are different from each other in the implementation of port security rules and regulations.

In general, the following objectives of port security never change:

1. Protection and preservation of port fences

2. Preservation of any illegal passage through the port fences

3. Protection and preservation of all cargo inside the ports, especially from theft and criminals

4. Protection and preservation of all port constructions, installations, instruments and equipment

5. Prevention of smuggling, stowaways and illegal immigrants

6. Regulation of the required port and vessel entrances and vice versa

7. Traffic organization inside the ports
8. Security clearance to enforce the authority requirements concerned of the vessels for leaving or calling the ports

9. Assistance in marine search and rescue

10. Protection of the facilities by prevention of crimes and destruction inside and on board the vessels

11. Information to the higher authority of any abnormal matters

Enforcement and execution of these objectives are done through watchmen and coastal and marine surveillance with connection to the operation room of the port security units according to their characteristics as follows:

4.2.1 Guards

1. Port security unit sentries

These sentries are specifically for security protection of the port security unit facilities, such as

a) constructions

b) stores

c) offices

d) instruments

e) equipment

f) other facilities
2. Port gate sentries:

   Carry out the security investigation to ensure that:

   a) all persons passing through the gates are properly authorized

   b) no prohibited goods are allowed

   c) official release of cargo passing through the gates exists

   d) any specific order is to be carried out

3. Vessel sentries:

   The security investigation should be carried out to ensure that:

   a) security protection of vessels exists

   b) all persons passing through the gangway are properly authorized

   c) no prohibited goods is allowed to leave or board the vessels

   d) no person may leave or board a vessel on arrival, other than the pilot, until permission has been given by the port health officer

   e) vessels not allowed to sail do so without the final authorized clearance

   f) any specific orders be carried out
4. Tower sentries:

Towers surround the ports with fence lines and have the following duties:

a) enable the sentries to keep watching the fences for protection

b) watch and report of any illegal passage through the fences

c) inform the operation room of any abnormal matter in sight within the fence range or inside the port

5. Other port sentries:

These sentries are employed for the protection of extra important

a) personnel

b) cargo

c) vessels

d) some of the port facilities.

These employments are often temporary but might be permanent for extra important facilities of the ports.

4.2.2 Port surveillance

These are either roving patrols or mobile vehicle patrols for keeping watch inside the ports and inform the operation room of any abnormal matters.
1. Roving patrols

They carry out their responsibilities in the following limited areas to ensure cargo protection from any theft or damage

a) Roving patrols are to enforce the security protection of the cargo in the open storage area around the clock

b) Roving patrols are to enforce the prevention of unauthorized persons entering the shaded storage areas after working hours

2. Mobile vehicle patrols

These are short range vehicle patrols for keeping watch inside the ports and near the fences around the clock to ensure

a) Enforcement of security protection to all

I. construction, installation and other port facilities

II. berths and vessels alongside

III. open storage areas

IV. shaded storage areas

V. port fences

b) Prevention of any illegal passages through the port fences

c) Supervision of traffic inside the ports by taking care
of

I. traffic casualties

II. different uses of parking yards

III. strict prevention of unrequired traffic in certain areas

IV. speed limit

V. driving licenses and vehicle documents
d) Observation of the cargo handling inside the ports
e) Observation of the cleaning and maintenance of all port facilities
f) Follow up of the sentries and surveillance inside the ports to ensure that they carry out their jobs properly
g) Provision of the available assistance required
h) Arrest of any violator of the port security rules and regulations and frontier security legislation

4.2.3 Marine surveillance

There are two types of marine surveillance, namely,

1. Short range marine surveillance

2. Medium range marine surveillance

Both types have the following responsibilities within their ranges:
a) early warning of any abnormal matters
b) informing of any detection of marine pollution
c) dealing with marine floating bodies according to the specific rules and regulations
d) assisting in marine search and rescue
e) security inspections of all vessels other than military whenever required
f) arrest of any violating vessel to the frontier security legislation
g) security protection to all marine vessels, constructions and installations within the port area
h) arrest of the violator of the frontier security legislation or the port security rules and regulations
i) connection with the operation room should be observed

4.2.4 Operation room

There is one operation room for each port security unit to receive information and direct the guards and surveyors for the required procedures; also to receive the casualty signals within the port area and to direct the nearest patrolling craft to provide rescue assistance.

The Frontier Forces play a very important role to the port development. This is clearly shown through the shortage of smugglers, smuggled goods and illegal immigrants all over the country. The objectives here are to reduce investments by using the alternative exchanges with more security protection.
4.3 Port Security Proposal

The Frontier Forces have developed in different stages parallel to the Government's five year plans. Therefore the port security units have obtained the vital part of this development. A quick development is to serve the objectives which the port security units were established for. Since these objectives never change the execution depends on the requirements. Thus the following objectives were proposed:

1. more consideration of the security protection

2. long run investment reduction

These are the requirements for the ways of implementation which will be explained as follows:

4.3.1 Guards

1. Port security unit sentries:

Sentries are very important for the security protection of the port security unit facilities. Reduction of manpower is required as follows:

a) cover the important places with the same closed circuit television (CCTV) used for the port

b) buildings are to be combined if possible within one fence and placed with sentries on the gates.

2. Port gate sentries:

The procedures are to be carried out to ensure the identification of personnel and cargoes for the security protection and prohibited goods prevention at the port.
gates.

Technological means are required for:

a) reduction of costs by saving time when avoiding the procedure delay

b) reduction of manpower and continuous visual supervision

c) more efficiency is to be obtained.

These technological means can be applied as follows:

a) specified gates for the private vehicles attached with personnel gates

b) specified gates for the heavy transports

c) gates should be equipped with suitable instruments for the detection of explosives and security control

d) gates should be assisted by cannabis detection dogs

e) gates should be provided with the same closed circuit television (CCTV) system

3. Vessel sentries:

As soon as any vessel comes alongside a berth, it will be provided with a sentry, located on the berth beside the gangway for:

a) the vessel's security protection

b) prevention of prohibited things to leave or board the vessel
c) prevention of unauthorized personnel to leave or board the vessel

These sentries should be properly equipped to enable them to enforce the law and to be in continuous connection with the operation room.

4. Tower sentries:

Tower sentries are not used to enforce the law. They are appointed as "lookout" from the operation room for the port fences if "there is no availability of the closed circuit television (CCTV) system", as follows:

a) there should be continuous reports on the fence situation

b) reports on any illegal passage throughout the fence

c) reports on any abnormal matter on their side.

These towers should be equipped with night binoculars and communication connections with the operation room.

5. Other ports sentries:

These are provided by the operation room when necessary for the protection of extra important cargo, facilities and very important personnel. They are temporary cases which have specified settlement for each post.
4.3.2 Port surveillance

More consideration to port security protection will prevent illegal immigrants, theft, destruction and crimes. This will give more confidence to the port users and reduce the insurance costs including the direct and indirect benefits to the country which has been previously explained. The reduction of costs will lead to more competitive export power and to the animation of the local market. There should be provision for sentries or roving patrol for security protection of:

1. cargo in open storage areas
2. shaded storage places
3. constructions, installations and other port facilities
4. port fences

All these need more manpower to be spread all over the port to cover each small imaginary division of the port.

The increase of manpower will cause more requirement of:

1. administration service
2. construction requirements
3. other instruments and equipment facilities

Moreover, the use of vehicle patrols has its own economical disadvantages, as follows:

1. Need of more manpower because:
a) the drivers only are not sufficient to carry out the surveillance

b) vehicles could not pass through the narrow places

2. Capital and variable costs of the vehicles are very high.

The best alternative exchange to security protection in the long run to be applied to the open and shaded storage areas, the inner port facilities and port fences including the towers are:

1. Motorcycle patrols

2. Closed circuit television (CCTV) system

3. Early warning bills

4. Emergency division

5. Operation room

6. Communication net.

A combination of the above mentioned points is the best solution to be considered from a security point of view and from the long run economical aspects, as follows:

4.3.2.1. Motorcycle surveillance

The motorcycles have a privilege over the vehicles due to the smaller size and lower investment of the capital, maintenance and consumption costs. This privilege leads to the following advantages for the port security protection:
1. Manoeuvring capability in narrow places

Thus the sentries or roving patrols are not required any more for the open and shaded storage areas.

2. The drivers are sufficient to carry out their patrol surveillances alone

3. All this leads to save manpower

4. Capital and variable costs are very low

5. It may easily increase the number of patrol surveyors due to the lower cost and manpower handling

6. Less disturbance to the traffic

7. The drivers are enforced to carry out their duties properly.

The only privilege of the vehicles is that they can carry out arrest of criminals, even though this is not a complete privilege due to the following reasons:

1. The patrol surveyors are not allowed to leave their basic duties in specific area of responsibilities unless they are covered by another surveyors

2. The ports are in the closed area under full security protection and are connected to the operation room

3. The ports are equipped with closed circuit television (CCTV) systems connected with night vision cameras and video record system

4. The emergency vehicles of the emergency division are
available and on call around the clock under the orders of the operation room

5. Chasing of criminals by motorcycles is easier, especially in narrow places

All these obstacles will prevent the criminals from escaping or at least delay them for a moment until the arrival of the emergency force. The motorcycles are connected through communication nets to the operation room. They can provide the following two types of patrol surveillance:

1. Limit range surveillance:

They have full responsibility for a limited area of the port, such as open and shaded storage areas and other important port facilities. They report casualties to the operation room and hand them over to the emergency forces.

2. Full range surveillance:

This type of surveillance is carried out all over the ports and has the following functions:

a) protection and preservation of port fences

b) prevention of any illegal passage throughout the port fences

c) supervision of the traffic

d) observation of the cleaning and maintenance of the port facilities
e) observation of the cargo handling

f) provision of available assistance required

g) support to the limited range surveillance when required until the arrival of the emergency forces

h) follow up of the performance of the sentries and other surveillance

4.3.2.2. Closed circuit television (CCTV) system

The ports are in need of closed circuit television (CCTV) system connected to the closed circuit video equipment and night vision cameras. The circuit is to be operated from the operation room to cover the following places:

1. Port gates

2. Port fences
   The cameras may be fitted on the towers which are alongside the fences

3. Open and shaded storage areas

4. Berths

5. Traffic roads

6. Other important facilities inside the port

7. Port security unit gates

8. Port security unit fences

9. Other important port security unit facilities.
The closed circuit television (CCTV) system is very important for the security protection with the combination of the sentries and surveyors. The following benefits are to be achieved:

1. Reduce the number required for the supervision and patrol surveillance

2. Supervision of the performance of the security guards and surveyors

3. Immediate decision and quick advice as soon as required

4. Follow the cargo handling operation

5. Follow the port cleaning and maintenance

6. Supervision of port traffic

7. Video-recording of the casualties to be used as evidence and reference

8. Direct surveyors to the right spots

4.3.2.3. Early Warning Bills

These are very important local warning bills. They have sound detection for the following different reasons whenever they are fitted to the suitable required locations

1. Detection of fire

2. Detection of heat when risen to a specific temperature

3. Detection of specific quantity of smoke density

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4. Detection of any quantity of explosives

4.3.2.4 The Emergency Division

These divisions are equipped with a limited number of vehicles which are considered to be sufficient with the other required emergency facilities. The size of the divisions depends on the port requirements. The emergency divisions are on call around the clock under the direction of the operation room.

4.3.2.5 Operation Room

The operation room is under supervision of the operation section. Officers of the day are in charge of the work performance during their duty. The communication connections between the sentries and surveyors goes through the operation room in which directions are to be provided. Combination of the following will serve the operation room to carry out their responsibilities:

1. Sentries and surveyors who are connected through the communication nets

2. The closed circuit television (CCTV) system

3. The emergency division

The operation room is considered to be the heart of the port security units. It carries out the following responsibilities around the clock:

1. Supervision of the performance of the security guards and surveyors
2. Advice and direction to the security guards and surveyors

3. Provision of service or enforcement of the law whenever required

4. It may act as sub rescue coordination centre (SRCC) within the port areas.

4.3.3 Marine surveillance

There are two types of marine surveillance used within the port area, namely

1. medium range marine surveillance and

2. short range marine surveillance.

These are very important to ensure the security protection. Their responsibilities are as previously mentioned.
4.4 The Port Entry Permits

As previously mentioned, the ports play a very important role for the economical aspects of the country. At the same time the ports may be misused by those who are violating the law, such as

1. smugglers

2. stowaways and illegal immigrants

3. theft and destruction

4. violation against the specific rules and regulations

For this the security protection of the ports is very important. The implementation goes through the following procedures:

1. Security protection through sentries and surveyors assisted by technological equipment

2. Security inspection to the port areas at the port gates and vessel gangways

3. To ensure the personnel limitation to the port uses only to

   a) avoid personnel congestion at the port gates and vessel gangways

   b) avoid traffic congestion

   c) ensure more consideration of inspections and security protection

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By implementation of the above mentioned points. Great obstacles are facing those who try to misuse the ports. The first and second points regarding the security protection and inspection were explained previously. The personnel limitation is obtained by the port entry permits.

There are many kinds of permits for more identification as follows:

1. permanent port entry permits
2. temporary port entry permits
3. one time entry port permits
4. visitors' port entry permits
5. very important personnel (VIP) port entry permits
6. crew port entry permits

The port security units are responsible for conforming and issuing of all the port permits freely except for the crew port entry permits which are issued through the cooperation of the immigration department. The permanent port entry permits are considered as the main port permits. They are issued to the long term continuous port users for a time of validity not exceeding two years. The continuous port users who are not applicable to the permanent permits, have another solution by using the temporary port entry permits. If the port users are not in continuous need of port entry and are not at an emergency call, then one time entry port permit is sufficient. The normal visitors are allowed when granted application shows their identification, surrendered to the operation room. The port security units should be
informed of any (V I P) visitors to prepare the full arrangement of the security protection. The vessels' crew is permitted to leave and board their vessels with the cooperation of the immigration authorities. As a proposal, the crew should be allowed directly by the minimum procedures for the following reasons.

1. The country has achieved a fast development including the local industries.

2. The crew is of worldwide nationality and might be used as another face of advertisement.

3. The crew never stays back due to its high income.

The permanent and temporary port entry permits should be issued against a reasonable fee according to their time duration of validity in order to achieve the following benefits:

1. limitation to the required permits

2. limitation of time duration of validity of the permits to be as required by the work

3. the time duration of the validity of the permits may exceed two years

4. indirect penalties to permit loosers

5. continuous income for the port security units to cover some of their requirements

6. reduction of the requirement quantity of the port entry permits

7. reduction of the requirement of manpower

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8. limitation of the port entries even from the port users themselves once they have no business there

The permanent port entry permits proposed, show the full identification as follows:

1. Full identification in the Arabic and English languages

2. The blocks which are not neglected show the conformed places for entry

3. Stamps showing if the person is allowed to
   a) board the vessel or not
   b) drive the vehicle inside the port or not

4. The permanent port entry permits are in colour but not harmonized with the other permits

5. The temporary port entry permits are just copies of the permanent ones.

The following identification of the permit carrier is taken into a one page file

1. application of the request

2. copy of the Saudi national identification card or copy of the foreign citizenship

3. copy of the permit itself

4. copy of the driving licence if in need to drive inside the port
Figure 4 shows the chosen port entry permits of King Fahad Industrial Port at Yanbu which has easier multipurpose usage, procedures and the privilege of lower costs as follows:
1. easier and quicker typing of information

2. not in need of another application or identification form

3. only one copy of both sides of the permit has to be produced

4. the permit file is only a one page combined copy of the permit and personnel identification; the copy has the same sequence number

5. no identification difference between the permit and its file

6. easier and quicker precision of the permits and personal identification contents

7. the permanent port entry permits are just a copy of the permanent permits in which the costs are reduced up to 5% of the permanent permits

8. these permits are consuming less stationery, copying, typing and storing; also the costs are less than for other permits

9. the permits have the following numerous objectives:
   a) personal identification to the port security
   b) the exact terminals to be permitted
   c) using the vessel's picture stamp as shown in figure 5 for the permission to leave and board vessels
   d) using the car picture stamp as shown in figure 5 for the permission to drive the cars inside ports
The car picture stamps are used as an alternative to the vehicle stickers which have many disadvantages, such as

1. the car might be driven by many users

2. authorized persons may have more than one car

3. the cars might be changed or substituted at any time

4. seeing the pictures may give more confidence to the port security guards. This way they do not have to ask for the driver's identification

5. the stickers may be spoiled by sunshine

6. the stickers are more connected to vehicles while the permits are more connected to manpower, which is most important from a security point of view.

Although there are advantages with these permits, the using of computers is the best way to achieve full port security unit operation.
CHAPTER FIVE

TRAINING

The organization normally consists of three elements

1. Constructions

2. Instruments and equipment

3. Manpower

Manpower is the most important element which administers, manages, builds, manufactures, discovers, maintains and operates the other elements. Efficiency and effectiveness mainly depends on a combination of quantity and quality. Qualification and training of the manpower are the core to gain more expertise and skilled personnel.

The objectives of the education and training are to provide

1. a sufficient number of manpower "Quantity"

2. qualified, expert and skilled personnel "Quality"

Shortage in manpower causes stress, surplus causes slackness while lack of quality causes lack of efficiency and effectiveness. A combination of quality and quantity is very important.

The Frontier Forces' General Directorate has established the training section under supervision of the operational department to obtain the same objectives. Planning and organization of the training of the Frontier Forces are the main parts of their responsibilities. The Frontier Forces established nine training centres at:
1. Riyadh  
2. Jeddah  
3. Dammam  
4. Gizan  
5. Najran  
6. Arar  
7. Al-wajh  
8. Al-quraiat  
9. Al-sulail

The main objectives of these training centres are to convert the new entry to the military life and to develop the employees continuously. The Riyadh Training Centre is the largest among them in which the following professional courses are held:

1. vehicle driving courses
2. telecommunication courses
3. mechanical courses
4. electrical courses
5. generators' operation and maintenance courses
6. typing courses
7. sport training courses
8. parade training courses

The Frontier Forces have established the Naval Training Centre in Dammam and the Naval Institute in Jeddah to fulfill the marine vacancies by expert and skilled naval personnel. Many professional courses are held to convert the new entry to the naval life and keep developing the naval personnel in their profession.

The Naval Institute in Jeddah has been developed to carry out
the following courses:

1. Seamanship
2. Communication
3. Navigational
4. Marine, electrical
5. Marine mechanical
6. Marine electronical
7. Marine electronical
8. Marine welding, denting and painting
9. Marine administration
10. Marine logistics
11. Parade training and armament
   including sea-training onboard a training ship.

The Frontier Forces used the privilege of the training and education available inside the kingdom, such as:

1. Staff and Command College
2. King Fahad Security College
3. King Fahad Naval College
4. General Administration Institutes
5. Many security institutes
6. Many civilian institutes

7. Many colleges and universities

8. Cooperation with the Ministry of Education as follows:

   a) providing the teaching staff to the Frontier Forces schools

   b) teaching at the Ministry of Education's schools, the Frontier Forces personnel.

Numerous Frontier Forces employees are taking part in the basic, professional and advanced courses. Many officers graduate annually from the King Fahad Security College as well as from different naval colleges abroad. They prepare them according to their performance and efficiency by the different qualifications inside and outside the kingdom in order to enable them to administrate, manage and command. By the development of the Frontier Forces' naval institute in Jeddah and the establishment of the King Fahad Naval College at Jubail the Frontier Forces were able to convert and develop their own naval personnel inside the kingdom. The Frontier Forces give more attention to the daily field training to upgrade the manpower level. The operational sections of the maritime regions, districts and units are supervising this field training within their limits.
The marine training proposal

As previously mentioned, the manpower is the most important element in the organization. They carry out the administrative and operative techniques. The converting of the new entry and developing of naval personnel to introduce more efficiency and effectiveness on the operational overview and more experts will be achieved.

The administrative capability depends on

1. personality

2. qualification

Consideration of personality or qualification alone is not enough. A person can command but might take the wrong decisions while a qualified person knows the administrative procedures but might not be able to enforce the decisions. Thus the evaluation is required for:

1. The person to command

2. The operational efficiency and effectiveness.

Because

the more operational expert and efficiency the more capability to command.

Accordingly, considerable qualifications have to be provided. The naval officers are the core of the Frontier Forces' marine operation and administration. Thus they should be categorized for upgrading their level of qualifications according to the following constant harmonized evaluation:
1. The first stage:

Evaluation during the academic studies which end with graduation degrees

2. The second stage:

This is the field operational stage in which the officers who have graduated, work in marine surveillance. They are evaluated annually according to their efficiency and effectiveness.

The final percentage of this stage is accounted for by the end of the twelve years of operational work.

3. The third stage:

This is the training courses stage in which it is compulsory for officers to attend the following important courses:

a) parade training and armament courses

b) watchkeeping courses
   officers will not be allowed to command any vessel without successful completion of these courses

c) logistics courses

d) general maritime administration courses

The final percentage of this stage is accounted for from these four courses only.

By the end of the twelve years of training and operational field work, the final percentage is accounted for the three
stages. Personality, efficiency and effectiveness of the officers are evaluated according to the final percentage. Thus it will be categorized as follows:

1. Officers who obtained 80 % and above:

   They have more expertise and efficiency practically and theoretical capability in their professional work. They should be given more chances and opportunities in obtaining the advanced qualifications, such as:

   a) MSc and PhD in maritime administration

   b) staff and command degrees from staff and command colleges.

Because they should be prepared for higher positions

2. Officers who obtained between 60 - 79 %:

   They should be considered as in the second stage of the practical efficiency and professional capability. They have less ability to manage, administrate and command. Accordingly, they should be given less duration of period of the advanced courses, such as:

   a) advanced courses in maritime administration

   b) advanced courses in marine professional subjects

Because they have less selection chances for higher positions in organizations and they have the capability to administrate and command the lower stages of the organizations. Those who had the advanced courses in the marine professional subjects are capable to be instructors in the Naval Institute and naval training centres.
3. Officers who obtained less than 60%

These officers should continue for the next four years in the operational field and then handle the light administrative work according to their ability until their early retirement.

This evaluation will show and examine the personality and efficiency during the fifteen years of training and field operation. Raising of their qualifications according to this evaluation is a very good way for personnel encouragement and for improvement of the organizational level as will be mentioned briefly:

1. More field operational usage of naval officers

2. Raising of their field operational ability by compulsory courses

3. Encouraging them to obtain the field operational efficiency and effectiveness

4. Encouraging them to obtain a high level in their training courses; this will also improve the course standards

5. Choosing of suitable personnel for different stages to manage, administrate and command

6. Improving organizational levels

7. Ensuring continuous ability of the organization

This way of personnel encouragement and organization improvement due to the evaluation might be applied to new bodies of naval graduation officers.

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On the other hand, the training centres which are located in the marine regions should be converted into naval training centres, since the responsibilities of the Frontier Forces in the maritime areas must deal with marine matters.

\textit{e.g.}

In order to prevent smuggling and illegal immigrants in the maritime areas, marine vessels must be used.

Thus, the manpower of these regions should have the experience in this regard, such as naval personnel who are capable of doing their marine and coastal surveillance.

Due to the availability of the Naval Institute in Jeddah and the Naval Training Centre in Dammam, the other training centres in both cities should be combined with the Naval Institute and the Training Centre to save manpower and investment.
CHAPTER SIX

CONCLUSION

The Frontier Forces General Directorate was established to carry out the basic duties and responsibilities for security protection of:

1. Internal waters and the territorial sea,

2. Coasts, islands and boundaries,

3. Sea and land ports, and

4. Other official frontier entrances.

To assure the prevention of smuggling, illegal immigrants, crimes and destruction the Frontier Forces have the authority and ability to enforce the law and to provide services as well as other responsibilities included in the frontier security legislation. Accordingly, the Frontier Forces were organized to carry out their responsibilities. The General Directorate's headquarters was placed on top of the hierarchy of authority and the frontier area was divided into eight regions, four of them at the eastern and at the western coast. Professional field operations are carried out by regional districts and units. Stations, check points and small units which report to the districts concerned are considered as the perfect field operation.

For the sake of this research, consideration is given to the organization of the coastal surveillance to obtain

1. Security protection, and

2. Economical aspects.

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The above mentioned points need a combination of responsibilities by delegation of authority to suitable organizations. Necessary arrangements have to be made.

Accordingly, the field organization proposal of coastal surveillance under the General Directorate Headquarters can be concluded as follows:

1. Maritime districts

2. Port security units

3. Naval training centres

4. Maritime stations

The districts are the most efficient and effective departments to carry out field operation responsibilities of the coastal security on coasts, islands and sometimes port security. Due to fast development all over the country, the maritime districts have no difficulties in carrying out their field responsibilities. It became necessary for the districts to report directly to the General Directorate Headquarters, since there are no major benefits in keeping the maritime regions on the chain of command and in increasing its efficiency and effectiveness. The choosing of strategic places for maritime districts with sufficient facilities closer to their required services will reduce the long run investments and maintain better use of manpower. It will be comfortable for pleasure and fisheries to use these locations and even more the number of maritime stations will be reduced. Maritime districts will be capable of carrying out their responsibilities through a combination of
1. Marine and mobile surveillance

2. Links of coastal radars.

3. Communication net and

4. Operation room.

The Frontier Forces spread the costly maritime stations all over the coasts closer to the small scale fishery locations to provide them with service and to enforce the law. The stations played a very important role as regards the economical aspects of the country. Most of the stations have now lost their economical profitability. A reasonable alternative exchange for these stations is required. Coastal radars reduce the long run investments and direct the main operation rooms of the coastal movements. Thus the coastal radars with cooperation of the districts' marine and coastal surveillance are the best alternative exchange for maritime stations. Stations may remain or be established when needed, due to social affairs or economical aspects with respect to pleasure or fisheries.

The Frontier Forces play a very important economical role to the country by carrying out responsibilities regarding port security. This role is different from the one applied on the coastal area because of the aim difference.

Each port has its own specific operation field to be considered according to its size and cargo handling. The development of port security depends on the development of the port itself. More consideration to port security protection will give full confidence to the port users and reduce the insurance costs including the direct and indirect benefits to the country. In general, the field operation of the port security proposed is carried out by a combination of
1. Sentries and marine and motorcycle surveillance

2. Closed circuit television (CCTV) system

3. Communication net

4. Early warning bills

5. Emergency division

6. Operation room

The port security units are responsible for conforming and issuing all port entry permits freely. The choosen port entry permits of King Fahad industrial port of Yanbu have easier procedure with privilege of lower costs. Also it has multiple use inside the port.

The operation room in the maritime districts or port security units is considered as the heart of the operational field. It plays a vital role in the collection of orders and information is circulated through the communication net to assist and enforce the law. The operation room may act within its area as a Marine Sub-Rescue Coordination Centre.

The use of new technology, such as coastal radars and a closed circuit television (CCTV) system has been introduced. It requires high capital but on the other hand reduces the long run investments and directs the operation room with valuable source of information. It also saves manpower and the number of maritime stations.

Manpower is the most important element of the organization. Efficiency and effectiveness depend mainly on a combination of quality and quantity. Qualification and training are the core to gain sufficient expertise and skilled personnel.
Frontier Forces have established ten training centres and one naval institute to convert the new entries to military life and to develop the employees continuously in their professions.

The training centres which are located in coastal areas should be converted to naval training centres to meet marine requirements.

The Frontier Forces have used the privilege of training and educational availability inside the Kingdom and managed other training and educational requirements outside the country.

A regular and harmonized evaluation has been proposed to prepare the manpower according to their performance and efficiency during fifteen years of training and field operation to select experts and skilled personnel for the right posts of administration, management and command. This will ensure more efficiency and effectiveness and maintain continuous high standard.

Choosing of multipurpose long, medium and short range patrol boats will obtain efficiently the required services at time of need.

The Frontier Forces have developed in different stages parallel to the government five year plans. Since the surrounding departments are in continuous development, the change will still go on to reach a suitable position. The internal security systems are linked with each other. If more consideration is given to the frontier security, this will relieve the stress and reduce the investments of other internal security systems.
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