CHAPTER I

PORTUGUESE SHIPPING - ITS MECHANISM

The effective maritime communication was the base of safety and survival of the Portuguese eastern empire. The State was directly involved in regulating the maritime trade and obtaining cargo for the Lisbon-bound ships and other overseas establishments. The Portuguese erected a strong chain of fortresses all along the west coast of India with anchoring facilities. Fortresses were built at Bassein, Chaul, Daman, Diu, Surat and Cambay. Similarly fortresses were also erected at Mangalore, Honavar, Calicut, Quilon and Cannanore. To impose the Portuguese maritime supremacy, they adopted two systems namely Cartazas and the Cafilas in the 16th century. The Cafilas had two functions; firstly to provide protection to the merchant-ships against the attacks of pirates and secondly to make sure that all native merchantships adhered to the Portuguese maritime rules and regulations. Special fleets of warships were maintained for effective working of the above system. The Portuguese organised different Armadas, from Goa. The main were the Red Sea Armada, the Gulf Armada, the Armada of Malacca, the Northern and the Southern Armada sailing along the Northern and Southern Coast of Western India. These armadas guarded ships trading under the Portuguese suzerainty. The Indian coast after 1533 was grouped into three Zones, namely Northern, Central and Southern Zones each under Captain Major at Bassein, Goa and Cochin. The Portuguese Northern Fleet (Armada de Norte) cruised around
Bassein, Chaul, Surat, Daman, Diu, & Cambay, while the Southern Fleet (Armada de Sul) cruised around Kanara, Cananore, Cochin, Quilon and Cape Camerin. This chapter aims at examining the working of the Portuguese Northern and Southern Fleets along with the Portuguese naval security arrangements in Goa.

**Operation Of The Fleet**

The Portuguese navigation from Goa along the western coast of India can be divided into two groups; namely Northern Fleet and Southern Fleet. The Northern Fleet were sailing upto the mouth of the Red Sea and the Gulf of Cambay, defending the western coast from Ormuz to Goa. The Southern Fleet cruised the Malabar coast upto Cape Comorin and even upto Maldives Island. The Northern Fleet sailed from Goa between 10th and 24th of August, prolonging it throughout the year except in monsoon. The return voyage was made from 8th to 15th of January, till the end of February. The sailing of the Southern Fleet was from 1st to 15th of August, continuing it throughout the year, except during monsoon, which generally lasted from 1st of May till 10th of August. The back sailing to Goa was throughout the year, except in monsoon, but the best time to reach was between November to January.

The sailing instructions for these Armadas were clear and elaborative. The Regimento given to Henry Mendonca Furtado, Captain - Major of the Northern Fleet, in 1707 stated that, leaving the bar of Goa, he would sail to Chaul along with other ships. From Chaul he would proceed to Bassein where he would unload the supplies meant for that fortress and then would sail to
Daman. From the port of Daman the ships would sail to Surat carrying the merchandise meant for that port. Without much delay these ships would sail to the port of Diu. Trips to Diu were undertaken mainly to supply provisions to the fort garrison. About 300 ships in two convoys sailed every summer from Goa. From Diu the ships would again sail to Surat to obtain the cargo which was kept ready at the fortress and from there the ships would sail to Goa with cargo for Lisbon-bound ships. The Caifilas sailing with cargo for home-bound ships were to be provided with security by the ships sent out from Goa. Fleets were sent out at different stages on different missions. In the month of January, a fleet was sent out with the prime responsibility of checking the activities of the Malabar Paraos. The same fleet was entrusted with the task of maintaining a vigil and checking all the ships sailing to Mecca without Cartaza. On their return journey to Goa, they would join other ships, sailing from China, Malacca, Moluco, Coromandel and St. Tome in the month of April. From the coast of Kanara, the ships had to sail with the Caifilas carrying food supplies to the city of Goa. A convoy of 4 ships sailed every summer to Kanara, accompanied by the fleet patrolling these areas to bring rice and pepper. "The Parangues would bring timber for mast and other material for shipbuilding to the Royal dockyard in Goa". The Malabar Fleets were always kept ready for any action between the coast of Kanara till Cape Camorim. Each convoy initially comprised of 30 to 40 boats, but the number came down to 12 in 1635. The ships of the Southern Fleet would leave the bar of Goa and sail to the fortress of
Piro, for unloading the material if any. From this point they would sail to Mangalore. From Mangalore, the ships would sail to Calicut where they would collect timber and other material for the dockyard. From Calicut sailing in Conserva the ships would navigate to Mahe, Tellicherry and Cannanor. The ships would leave the port of Cannanor without any delay to Goa.15

The pattern of the Cafilas sailing under the Southern Fleet was that, 'the Portuguese fleet gathered some crafts around the Cape Camorin and sailed to Quilon where other ships from Quilon and also Coromandel joined. All these were taken to Cochin. Then the protection fleet returned to Cape Camorin to collect stragglers and they all sailed to Goa, collecting more ships from Mangalore, Barcelore and Onor (Honavar) on the way.'16 While on the return voyage, the ships were instructed to make a halt at Angediva, if at all required. From Angediva the ships would come to Cabo de Ram where unloading of the material meant for that fortress was made. From Cabo de Ram the ships would sail at the earliest and in the proximity of Assolna to the bar of Aguada.17

Crew Of The Fleet

The crew of the commanding vessels such as Fragatas & Manchuas comprised of the Captain, Masters, Under Master, Store-Keeper, Chaplain, Carpenters, Caulkers etc.18 The Captain - Majors in the command of the Armadas were directly under the orders of the Governor or Viceroy of Goa. The Captain Majors were appointed by the Governor and his Council. The Council also fix the number of vessels in each fleet.19 The Sarangues and the Tandels of the small
country crafts were the locals. The Portuguese also employed *lascarins* soldiers, in the Cañilas. They also engaged the services of *Mocadam*, a native contractor for procuring local recruits, who were mostly oars-men.

**Operational Instructions To Captain - Majors**

Before leaving the bar, the Captain - Major of the fleet had to prepare an up-to-date list of the soldiers on board and divide them as he feels proper for the purpose of defense. The allotment of work for both, infantry and artillery personnel on board had to be made in the presence of their respective Incharge. The Captain - Majors had to prepare two reports stating the positions allotted to the people on board. One copy had to be handed over to the authorities on the shore and another had to be maintained on the ship. All technical data such as the hours of tide, soundings, location of shoals etc. obtained during the voyage had to be maintained and submitted to the authorities by the Pilot of the ship on return voyage. If Captain used any material from the store of the ship for his personnel use, the same had to be recorded in the official register and all similar expenses had to be mentioned in the *Matricula Geral*. At the time of making the payment of the wages, a deduction was to be made according to the rules. In case of Captain's death during the voyage, the Master of the ship was required to get himself acquainted with the work of the Captain. Care had to be taken to maintain secrecy over the same and on reaching the port, replacement had to be made immediately.
Quarrels among the soldiers were common over the issue of their respective places on board. To avoid this, the Captains were instructed not to allow any soldier to leave his place or sleep anywhere he may please, even if the ship was anchored and free from any equipping operations. The soldiers were prohibited from leaving the ship during the night time at any port. The Captain was also instructed not to allow his sub-ordinate officers to select rooms for them during the voyage. The night duty was given to the people by putting lots and the Captain tenants would decide the work duration of each person. No unauthorised intervention in the ship's administration was allowed. If any change in the operation was to be introduced at any level, prior permission of the Viceroy was essential. The Captain, Clerk or any other officer of the ship would not leave his ship without prior permission of the authorities, unless called for checking by custom officials in any exceptional case. Disciplinary action was to be taken against those who violate the code of behavior. Any rebellion on board was severely punished. Illicit conversations, unauthorised means of amusement etc. were punished with the fine ranging upto 200 Cruzados. Illegal arms transactions were common when the ships of the fleet were at the port. To put an end to this, an order was issued by which nobody was allowed to take the arms from the ship. At the same time all required arms and ammunitions were to be obtained from the state Almazens.

The Captain - Majors of the fleet were instructed not to waste the gun-powder in unnecessary firing. They were also instructed to regulate the firing of the shots (salvas) while
entering and leaving the port. This regulation was necessary in order to maintain sufficient quantity of gun-powder on board to face the enemy attack. 31 No soldier or any other crew member was allowed to disembark at any port of Kanara. If there was any need to do so, for obtaining fresh provisions to the fleet, only a person of high integrity had to be entrusted with this job. The Captain was also prohibited from passing any unauthorised sailing permit to any ship. 32 The fleet sent on naval expedition had to furnish a detailed report of the naval exercise carried out to the authorities on the return voyage. The Captain - Major of the Southern Fleet, sailing in the Fragata Nossa Senhora de Milagres was asked to give report of the material used in the naval expedition which was sent to Cananore. 33

Specific instructions were given to the Feitor to procure the supply of pepper in time so as to effect a prompt departure of Lisbon - bound ships. The pepper was brought to Goa in convoys sailing under the protection of the warships. At the time of the loading of cargo the conditions of the ship were thoroughly checked by the technical experts in the presence of the officials of the Revenue Council. In one case on December 25, 1617, the Overseer of the Revenue Council summoned the master of the ship Nossa Senhora do Cabo, quarter-mestre and clerk along with the Chief Master Valetim Themudo to verify if the holds of the ship were capable and strong enough to receive the pepper. 34 Similarly if any ship was in bad shape, the Revenue Council inspected the same before undertaking any loading operation and confirmed the same under the oath. In the case of the ship Nossa Senhora dos
Remedios, the Revenue Council declared under the oath that the said ship had undergone complete repairs and was in a position to make a voyage.\textsuperscript{35}

As soon as the fleet reached the port of Kanara, the ships were ordered to take the cargo of rice meant for them. At the time of loading, a register was maintained by the Captain in which the quality and quantity of the cargo was recorded with all specific details. The private cargo of the sailors were also recorded in the register.\textsuperscript{36} At the time of loading the Captain-Majors of the fleet were instructed not to allow the loading of the cargo on any other ship without first loading the ship of the convoys.\textsuperscript{37} Under no circumstances the ship could wait at any port for not more than four or five days for the purpose of loading. In the \textit{Regimento} given to the Captain-Major Augustin Barros of the southern fleet, he was instructed to undertake the loading of rice at Kanara as quickly as possible.\textsuperscript{38} The contractors were asked to bring the pepper to the ships which were about to leave Goa, till 20th of November every year. They had to store or supply at least half of the agreed quantity by the end of September to the factories at Cochin or Kanara and the remaining half at the end of October.\textsuperscript{39} To avoid loss to the Treasury, the Captains of the ship were not allowed to leave the port of Kanara without proper loading. If sufficient quantity of pepper was not found, then the Feitor had to make an arrangement for procuring the lacking amount.\textsuperscript{40} On completion of the loading operation, the Feitor had to give to the Master of the ship the keys of \textit{camara, camorotes} and \textit{escotilhes} along with the register (Livro de Cargo) which he
would maintain with utmost care and hand over to the Finance Comptroller at the time of the unloading the cargo. All unauthorised loading or embarkation was prohibited. If any permission was granted, it had to be recorded and maintained in the official register. The Captains, Master and other officials of the ship were not allowed to load wheat, rice or any other heavy cargo, which might hamper the movement and the defense of the ship as well as of the convoy.

Many irregularities and other malpractices continued at the time of loading the cargo at Cochin and Kanara. Many times private cargo was not registered to evade custom duties. To ensure better revenue collection it was laid down that all people who sail in the ships from Cochin had to register the cargo with the Clerk of the Fazenda. If any unregistered cargo was found, it was liable for confiscation. On 28th of March, 1618, the king wrote to the Viceroy suggesting that, at the time of loading of the ships, 2 people of high integrity should help in the loading operation and should embark on the same ship. These people were given a special Regimento as regards to the loading operations. Whatever amount of cargo a person takes from Cochin, the record had to be maintained by the Clerk of the Fazenda. This was necessary because the Finance Comptroller would ask for the cargo records every three years so as to ascertain the amount of cargo sailed to Goa. All records of the cargo had to be sent to Goa in the first ship sailing from the fortress of Cochin to the city of Goa. The records had to be delivered to the Board of Despatch of the Finance Comptroller, along with the certificate of
the Ovidor of the fortress certifying that the records had been handed over to the Feitor, stating the name of the person, name of the ship etc. On reaching Goa, the person had to handover the records along with the certificate of the Board of Despatch of the Finance Comptroller to Goa authorities. The Clerk of the Fazenda at Goa, had to issue an acknowledgement receipt of the records received stating in it, the day, the month and the year.48

Safety Measures For The Ships

The safety of the ship was given top priority during the voyage. Standing Orders were given to the Captain-Majors of the Northern and Southern Fleets to ensure the safety not only of the convoys but also of the ships of the fleet as well.

The Portuguese ships sailing from Goa to Cochin had to be adequately equipped to counter the Dutch attacks and to check the piracy. An order was given to Francisco da Costa de Ataide, Commander of the Fragata, stating that, the Nau Conceição sailing from Cochin be provided with heavy guns. The same Commander was further instructed to take people from other Fragatas to strengthen the garrison of the Nau Conceição.49 The Captains of the ship at the 'bar' had to take all measures to ensure the safety of the anchored vessels.

A security ring was to be provided for the ships at Goa and Cochin during the loading operations. A naval garrison comprising of 26 soldiers with the prime responsibility of replusing the
enemy attack was to be stationed at a distance of 2 or 3 miles.\textsuperscript{50} For effective fire power, the decks of the warship had to be free from any obstruction for smooth mobilization of the artillery. The guns had to be properly arranged on the racks. In case the ship reached late on the coast of India, the Captains were instructed to take the ship to Cochin, and from there they were to sail to Goa, only after verifying the position of the Dutch ships. The Captains had to obey all the orders of the Governor in this regard.\textsuperscript{51} During the night, the main ship had to carry one lantern on the gavea. If other ships following the mainship were separated or mistracked during night, they had to follow the lantern fixed on the gavea of the mainship.\textsuperscript{52} The mainship had to sail in the midway along with other ships. Under no circumstances, the ships were to sail at the back of the main ship. In an order issued in 1704 the Viceroy stated that, the ships accompanying the mainship had to sail by its side, without keeping much distance.\textsuperscript{53}

No soldiers on board the mainship were allowed to sleep undressed, as they had to be prepared to face any attack at any moment during the voyage.\textsuperscript{54} The Captain and the crew of the ship were to be people of good technical knowledge and experience. In 1668, the Viceroy wrote to the Captain – Major of the Northern Fleet stating that, only those people who had sufficient knowledge and who could take effective and independent decisions on their own during any emergency should be taken on board.\textsuperscript{55} The Pilot was asked to avoid the bays and shoals and to follow correct route – instructions given to him by the authorities at Goa.\textsuperscript{56} The ships wanting to sail to Goa either from Kanara or Cochin had to keep
their sails ready early morning before the fall of the dew. The Captains were instructed to reach the Mormugao port probably by evening during day light, so that they could take the advantage of the artillery installed in that fortress for defense in case of any attack. An alert was sounded to the ships sailing to Bassein and Chaul in 1618 and were asked to avoid an open confrontation with the Dutch. In an order given to Manuel Fernandes, who was sailing from Goa to Chaul and Bassein, he was instructed to take the port of Rajapur, in case if he noticed any hostile ship on the way.

Controlled Navigation

The Cartaz or sailing permit was the main weapon of the Portuguese controlling the maritime trade. Ships sailing without Cartaz were liable to be confiscated. Every non-Portuguese ship had to obtain a Cartaz from the nearest Portuguese port. Goa was the main Cartaz issuing centre. The ships sailing overseas had to obtain their Cartaz directly from Goa while those sailing along the west could obtain from the nearest Portuguese outpost. All Indian ships trading out of the Gulf and Cambay in Gujarat were required to call at the Portuguese fort at Diu to obtain Cartaz. The Cartaz stated the number of the crew, tonnage of the vessel, artillery, cargo on board, the point of destination and so on. A security had to be executed at the port where the Cartazas were issued as a guarantee that, the ships would make a halt on return voyage at the port and pay the stipulated custom duties. Before any ship could sail out it had to be searched by
the Royal Factor to see that, it fulfills all the conditions. On 28th of Jan. 1709, the Minister of the king of Sunda, Ramchandra Pandit requested the Portuguese to issue a Cartaz to his barco of the capacity of 250 candis. The request was granted but subjected to many conditions. The ship masters were instructed not to carry on board any Abbissians, Turks and Arabs to any port. In the same manner, they were not allowed to take slaves, especially the Christian slaves and other items of trade which was declared as the monopoly of Crown. No trade connections with the enemies of the Crown were allowed.

All native ships sailing with the Portuguese Cartaz were required to produce the same before the Clerk of the Portuguese patrolling ship, whenever they were intercepted. The registration and the confirmation of the Cartaz by the inspecting Clerk was ordered only after examining the same carefully. The Cartaz had to mention specifically, the number of Muslim sailors, if they happened to be on board. In 1705, Cartaz was issued to one trading vessel which had onboard about 30 Muslim sailors. All their particulars were recorded by the authorities. No private merchant was allowed to sell any type of trading vessel to Muslim merchants without the prior permission of the authorities. The Feitores at the fortresses were instructed to check this type of transactions.

The violation of the Portuguese maritime regulations were not uncommon among the Asian ships under the disguise of European vessels. The Asians ships Captained by European national, flying
the European flag were sailing in the Portuguese waters. It was therefore suggested by the authorities, that the Portuguese patrol ship should intercept any such suspicious vessel and check the script in which the cargo register was maintained. If the ship was found violating the Portuguese maritime regulations, action had to be taken against the defaulting ship. This system was very effective in imposing the Portuguese maritime regulations upon the native rulers.

Forts In Goa

Soon after the takeover of Goa, Alfonso de Albuquerque embarked upon the task of fortifying the defense of Goa. The main purpose of fortification was to secure safety of the river passes. With this sole objective, the Portuguese erected number of forts, which were equipped with adequate artillery and manpower. All the naval installations in the river of Goa offered excellent anchoring facilities for the ships. In case of any attack the ships could take shelter behind the artillery fire of these fortresses. The main Portuguese naval installations in Goa included the fortress of Aguada, Fortress of Cabo, Gaspar Dias, Reis Magos and the Fortress of Mormugao.

i) Aguada Fortress

The prime motive behind the erection of this fortress was to check the danger of the Dutch and the English who made attempts to take over Goa. This fortress was provided with powerful artillery providing protective cover and checking the entry of the ships in
the bar of Goa. Though its work started in 1604, it was completed only in 1612 during the reign of Viceroy Dom Rue Lourenso de Tavora. Located on a hill at the bar of Goa, it encloses the whole peninsula at the South-West extremity of the province of Bardez and forms the Northern extremity of the Goa Bay. It had a wall measuring 15 feet high and 4 feet broad with a circuit of 48 fathoms on which there was a tower, 6 fathoms high, on the top of which is a lighthouse. There were fountains and wells within the enclosure which provided water for the ships. During the Viceroyalty of D. Francisco da Gama, a new fountain was ordered to be made for the purpose of providing water to the ships. In 1642 the garrison of this fortress was Captained by Luis Gonsal de Souza which included 18 artillery pieces, 80 soldiers and 3 naques for guarding the fort. In 1661, the naval garrison of this fortress was of about 100 soldiers. In 1774, the garrison was reduced and it now comprised of 1 Captain and besides his soldiers, 8 people were employed for special service of the Captain. Provision was also made for 1 Sergeant - Major, 1 Ajudante, 2 Chaplains of Franciscan Order, 2 Condastavel, 1 Warehousekeeper, 1 clerk and 30 artillerymen. This fortress had 2 gun powder rooms, 2 prisons, 4 barracks and a chapel dedicated to Our Lady Of Good Voyage.

ii) **Fortress Of Cabo**

This fortress was built during the reign of the Viceroy Dom Estevam de Gama in 1540. In 1635, the Viceroy Count of Linhares made some structural alterations. By virtue of the Royal Decree of
the Lisbon Government it was enlarged and a well equipped artillery detachment was installed in it. 75

iii) Gaspar Dias Fortress

The Gaspar Dias fortress was located on the Island of Goa on the left bank of the Mandovi, 1½ miles to the North-East of the Cabo and faces the fortress of the Reis Magos. Although the construction work started in 1598 during the Vice-royalty of Francisco da Gama, it was not completed even after 8 years. 76 A number of artillery pieces of different calibre were installed for the purpose of the naval security. The authorities ordered to make 7 large artillery guns, 2 of equal weight of 115 quintals of each, 3 culeibrinos weighing about 159 quintals and 1 camello de marca of 38 quintals. 77

Reis Magos Fort

This fortress was built by Viceroy D. Afonso de Noronha in 1551 and was subsequently extended during the reign of D. Francisco de Gama. In 1588-89 the Governor-General Manuel de Souza Coutinho added to the fortification 7 casemates or underground vaulted chamber, each provided with 124 steps in the interior of the parapet. 78 In 1661, the naval garrision of this fortress consisted of 30 soldiers. 79

V) Fortress Of Mormugao

The fortress of Mormugao was located to the South of Goa in a peninsula at the extreme north-western point of Salcete. The
significance of this fortress lies in the fact that, it affords protection to the entrance of the port and therefore, from a military point of view, this was one of the most important fortresses on the western coast of India. The main motive behind building this fortress was to guard the river traffic and the ships which sought shelter inside Zuari during the monsoon. In 1625, all ships near the Island of Goa were ordered to be anchored at Mormugao during the monsoon. In 1650, the Revenue Council decided to equip the fortress with sufficient artillery power. It was ordered that 1 bronze piece of 8 pounds, 6 iron pieces of 10 pounds of Galleon San Thome be provided at the cost of the State Treasury. In 1661, the naval garrison of this fortress was 140 soldiers. In 1774, the garrison included 1 Captain-Major, 1 Sergeant, 1 Ajundante, 2 Condestaveis, 1 Warehouse keeper, and 1 Clerk of the same. Apart from this there were 4 Squadrons Commanders, 66 soldiers and 30 artillerymen. The Captain-Major had 10 Naiques. This fortress being important and only next to Aguada, was provided with well equipped regiment.

vi) Cabo De Ram Fortress

It was originally built by the king of Sunda. The Viceroy Conde de Ega conquered this fortress and equipped it with 25 bocas de fogo. Within the walls of this fortress are said to be two springs of fresh water. "The Parangues sailing from Kanara sometimes used to make a halt at this point". In 1774, its garrison included 1 Sergeant - Major of infantry, 1 Ajudante, 1 Warehouse keeper, 1 Clerk, 1 Condestavel, 1 Captain and 2
companies of sepoys who kept strict vigil over the area. 87

Apart from this, there were numerous other forts erected by the Portuguese at different points to guard the passes. In 1779, the province of Bardez had around 15 forts. 88 But more emphasis was laid upon the fortification of Aguada and Mormugao forts, for they were the guarding keys of the Portuguese naval defense in Goa.

Naval establishment in Goa

As early as 1512, there were about 50 ships in India and in 1520, the total was 800. In 1525, there were number of ships in Portuguese India for various purpose. This included 6 Naus, 11 Galleons, 9 latten ship, and the Barges. In 1567, the number rose to over 90. 89 During the later part of the 16th and 17th centuries, the strength of the Portuguese naval fleet was very less. This was mainly on account of technical and financial difficulties. Two squadrons approximately of 30 ships were protecting the maritime trade, one to the north and other to the south of Goa. 90 Moreover, ships from Goa were sent to Macau, Mombasa, Timor and to other places on naval expedition. The Dutch began their blockade of Goa from 1640, with the paramount objective of putting down the Portuguese coastal trade. The Mormugao Port became their prime target of attack as they felt that with the fall of the Mormugao, the major Portuguese interport would be closed. The Portuguese therefore increased the number of ships at Mormugao. In 1642 Furtuoz Barboza Jordao, Admiral of the Royal fleet reached the Mormugao Port with 2 ships,
namely a Nau Nossa Senhora de Estrella and the Galleon St. Antonio with 180 people, for reenforcing the Portuguese naval garrison against the Dutch. 91 In September, 1675, a fleet comprising of another 16 ships of which 7 were Galleons, 2 Naus, 1 Patacho and 60 Oar ships equipped with 307 artillery pieces under the command of Luis de Mendonca Furtado, e Albuquerque was raised. 92 This fleet succeeded in pushing back the Dutch fleet. In 1773, Captain - Major Francis Xavier Henrique was instructed to guard the coast in view of the attacks launched by the Bhonseles on the Portuguese ships. He was also instructed to gear up the naval defense at Aguada. 93 In December, 1738, the Count of Sandomil reported to his superiors, that the whole navy in Goa, including officers, sailors and attendants numbered about 120 only, a figure equivalent to the crew of the ship. 94

The authorities at Lisbon, felt a need for maintaining a permanent naval fleet at Goa, equipped with artillery of various calibre. By a decree of 1774, issued by Marques de Pombal, the naval strength was restored to an effective figure. 95 It now consisted of 1 warship of 64 pieces, 3 Fragatas, 1 of 44 pieces, second of 38 and the third of 30 pieces. Provision was also made for 1 Palla of 24 pieces, 2 covertas of 14 pieces and 16 Manchuas of 5 to 7 pieces. There were another 5 ships meant for river navigation. A separate budget was made by the Revenue Council for maintaining this fleet.

The new decree stated that there should be 2 Fragatas of 1 battery with 26 pieces of 9 pounds calibre, 10 on each side, 4
cacahorres on the prow and 2 pieces on guardaleme carrying the
garrison of 50 soldiers along with competent officers. The
fragatas meant to guarde the coast were equipped with 20
artillery pieces of the same calibre and was garrisoned with
120 people. There were also 4 Pallas equipped with 18
artillery pieces, with the garrison of 180 people. Manchuas were
provided with 9 artillery pieces of 1 to 3 pounds calibre. Each
garrison consisted of 30 sailors.

Naval Man-Power In Goa

The decree of 1774 made a provision for 6 Captains of war
and sea for the 6 Fragatas of the high sea, being the
first two of the large capacity more distinct and
graduated. The 6 Captains of war & sea were given the charge of
the Fragatas to which they were nominated. When the Fragatas
were wintering on land, the Captains had to request the
Inspector of Navy to provide all that was required for the
vessels for their prompt departure from the bar whenever
ordered to do so. Each Captain had to visit the storeroom
(paiol) of the ship where the sails and equipments of the
respective Fragatas were stored. Every Sunday, the Captains,
had to submit a detailed report of the material on board
to the Inspector of the Navy. The number of the Captain-
Tenants was laid down as 12, 4 for the Fragatas of the high
tonnage; 2 for each of them; 4 to other Fragatas of the less
tonnage and 4 to the Pallas. There were about 14 tenants of sea,
2 for the Fragatas of less tonnage and 4 for the Pallas. Provision
was made for 14 guardas (guards) who had undergone a training in Aula da Nautica. For each of the above mentioned 6 Fragatas and 4 Pallas there was 1 Sergeant of sea and war. There was 1 Pilot, 1 Master, 1 Assistant Master, 1 Guard in the first 2 Fragatas and in other 1 Master and Assistant Master only. The overall authority was entrusted to the Governor and the Captain-General. 100

Naval Patrolling In Goa

As pressure of the Dutch increased over Goa endangering its safety, the Portuguese beefed up the naval security at Aguada and Mormugao. The bars of Aguada and Mormugao were put under strict surveillance by the Portuguese authorities. In 1659 26 ships were deployed to guard the bar of Aguada. 101 The Ajundante, Ambrozio Fernandes was instructed to patrol the sea from the bar of Aguada to Mormugao with a Manchua of war, equipped with gun-powder etc, to prevent any incursion of any hostile vessel. 102 If any ship was found entering the bar with superior artillery by overcoming the resistance of the patrolling ship, the Captain of the patrol vessel was instructed to fire 2 signal shots (pedrieros), for alerting the garrison inside the fortress of Mormugão and Aguada. 103 The Commanders of both the fortresses were instructed not to sleep at night nor they could leave the fortress. They had to give a detailed report to the Governor about the functioning of the fortress and the security arrangements made there of. 104 Prompt and effective mobilization of the manpower was emphasised by the authorities. The Commanders
of the fortress of Cabo and the Gaspar Dias were asked to employ the people from the neighbouring villages after proper screening to maintain a watch on the sea during the night time. The Manchaus which were free from convoys had to patrol the river throughout the night between Aguada and Mormugao to check for any foreign vessel near the bar. Similarly 4 Manchaus were deployed at Dona Paula and no other ship was allowed to sail beyond the marked area without the permission of the authorities. Manchuas were also deployed to protect the merchantships coming to Goa against the pirate attacks. These Manchuas were asked to patrol the coast from Canacona up to Tiracol. If any ship was found at the bar of Assolna, these Manchuas would escort them till the bar of Canacona and on their return would bring the hardware material from the fortress of Cabo de Ram. The Manchuas would then sail with the material to Aguada and deliver the same to the authorities which would then be passed to the dockyard at Old Goa.

Regulation On Entry Of The Ships Into The Bar

When ships were entering the 'bar' with the Portuguese flag, the Commander of the Aguada fortress had to give 5 gun salutes to the incoming vessels, while in the case of Viceroy's ship 21 gun salutes were to be fired. If any other European ship such as Pallas happened to be in the vicinity at that moment, they were also required to give gun salutes to the Viceroy's ship. On other occasions, all European and Arab ships had to send their respective officers to the Captain of the fortress to obtain
permission for firing gun salutes. No anchoring was allowed for any ship violating this order. Another important rule for the ship entering the bar was that they were not supposed to sail in groups. If the Captain of the fortress noticed any ship sailing towards the bar in a group, he would order to fire from the fortress two warning gun shots. The Captain of the ship had to communicate immediately to the Commander of the fortress the purpose of their voyage. If he failed to do so, the Captain of the Aguada fortress would call the people from the villages of Calangute Candolim and in the case of Mormugao from Vaddem and Sancoale for launching the attack. If any Fragata, Palla, or any other ship entered the bar during night they were required to lay anchor at a distance and would be allowed to anchor at the quay only after obtaining permission from the authorities.

The ships sailing to Old Goa had to cross the Aguada bar and obtain a sailing pass at Mandovi for entering the dockyard area at Old Goa. If any sailor or slave escaped from the ship while entering into the bar he had to be promptly arrested and handed over to the competent authorities. The Captain of Aguada would not allow any ship either of the Northern or Southern Fleet to enter the bar with any smuggled goods. Check was carried out of suspected ships and if anything found, it had to be delivered immediately to the said fortress. If any ship was found sailing with soldiers, slaves or any other person with or even without criminal record, the Captain of the fortress was instructed to send one of his officers to collect all necessary information. In
case, if any information was suppressed, then the ship was denied entry to the port.\textsuperscript{114}

If any European or Asian ship on reaching the bar ran short of supplies, the Captain of the deficient ship had to approach the Captain of the fortress for obtaining necessary information regarding the availability of supplies.\textsuperscript{115} As Portuguese got their supplies, both of food and cargo from the Malabar coast, they sought to maintain this venerable supply line intact by all means. Similarly it was their endeavour to keep Goa as a main naval base specially during 17th and 18th centuries. In view of this, the Pombalian administration introduced the above measures, restructuring the naval system, both in terms of material and man power.
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