

Identification of the transportation bottle necks of the food grains movement from Mainland to Andaman & Nicobar Islands, India.

Dissertation Report submitted in partial fulfilment of the requirement of
the degree of
MBA – Logistics & Supply Chain Management



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DECLARATION

I, **PanjalaPradeepGoud** student of **University of Petroleum & Energy Studies**, Dehradun, am pursuing **Master of Business Administration – Logistics & Supply Chain Management**, hereby declare that the dissertation report titled “**Identification of the transportation bottle necks of the food grains movement from Mainland to Andaman & Nicobar Islands, India**”, is an original work carried out by me availing the guidance of my project guide and to me entire satisfaction to this report bears no resemblance with any other report to any university or institute or published earlier.

Signature of Mentor

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Executive Summary

Andaman & Nicobar islands, are one of the Union Territory of India, is a group of islands in the Bay of Bengal. The food supplies for these islands are brought from the Mainland, mostly from the East Coast of the country. The Food Corporation of India & Civil Supply Department are playing a key role in the distribution of food grains for the people in the Andaman & Nicobar islands. The Civil Supply Department who has a presence in the inter-island distribution, will be procuring the food grains from Food Corporation of India from Mainland and mostly from Visakhapatnam.

A Multimodal Transportation Contractor will be appointed by Food Corporation of India, for a period of 2 years in order to make a Door-to-Door delivery of the food grains from the designated FCI Depots in Visakhapatnam to Port Blair & 12 other PDC's in Andaman & Nicobar Islands. The people from outside are restricted to visit few islands like Car Nicobar, Kamorta, Katchal, Chowra, Teresa which are in the Nicobar group of islands. A person with a valid reason to pay a visit can get the permissions from the Deputy Commissioner and could receive a 'Tribal Landing Pass' which can be on the landing. On top of it, there is no jetty present till now in the islands like Chowra & Teresa where the food grain supply has to be made by the contractor. The ships which carry the food grain have to be anchored close by to these islands, and discharged on the pontoons which will be dragged to the islands by the small wooden boats. The objective of this study is to identify the transportation bottlenecks in this project and to suggest the necessary solutions in order to make the smooth flow.

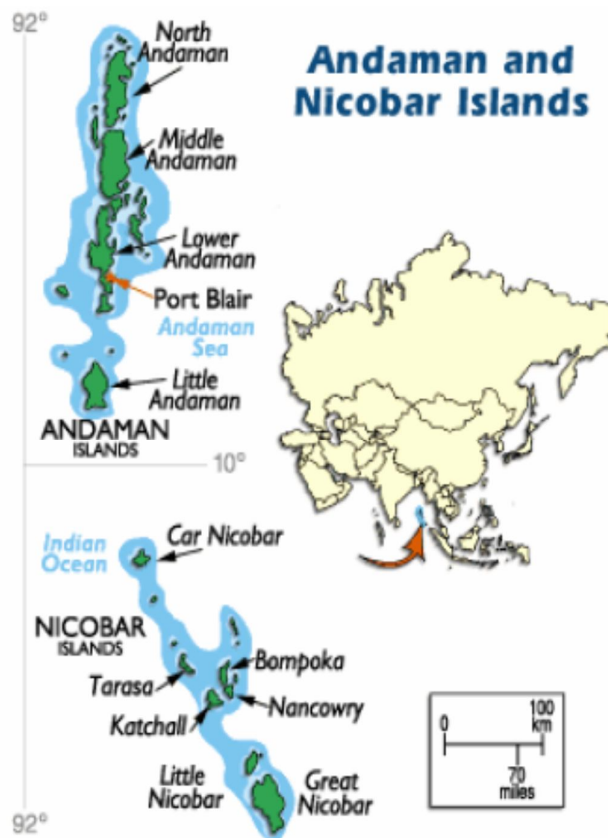
Introduction

Andaman & Nicobar Islands

General Characteristics

There are 572 islands in the domain having a range of 8249 sq.kms. In which, just 38 are forever possessed. The islands are stretched out from 6° to 14° North scopes and from the 92° to 94° East longitudes. The Andaman's are differentiated from Nicobar amass by a channel (the ten Degree Channel) with practically 150 kms wide. The most noteworthy point is situated in the North Andaman Island gathering (Saddle Peak which is at 732 m (2,402 ft). The Andaman gathering has 325 islands which cover a region of 6,408 sq. kms while the Nicobar gathering has just 24 islands with a region of 1,841sq. km(MSME).

Figure 1Map representing the Andaman & Nicobar Islands



Location & Geographical Area

The Andaman and Nicobar Islands are a gathering of islands at the crossroads of the Bay of Bengal and Andaman Sea, and are a Union Territory of India. The region is 150 km north of Aceh in Indonesia and divided from Thailand and Burma by the Andaman Sea. It involves two island aggregates, the Andaman Islands and the Nicobar Islands, divided by a 10° N parallel, with the Andamans toward the north of this scope, and the Nicobars toward the south. The Andaman Sea misleads the east and the Bay of Bengal toward the west.

Topography

The capital of the Andaman & Nicobar Islands, Port Blair, is found 1255 km from Kolkata, 1200 km from Visakhapatnam and 1190 km from Chennai.

Administrative set up

The Andaman and Nicobar Islands region is separated into 3 locale. Every area is sub-separated into sub-divisions and the taluks.

North and the Middle Andaman district Headquarters-Mayabunder

Diglipur Sub-Division

- Diglipurtaluk

Maayabunder Sub-Division

- Maayabundertaluk
- Rangatttaluk

The South Andaman district Headquarters- Port Blair

Port Blair Sub-Division

- Port Blair taluk
- Ferrargunjtaluk

The Little Andaman Sub-Division

- Little Andaman taluka (Hut Bay)

Nicobar District Headquarters: Car Nicobar

CarNicobar Sub-Division

- CarNicobartaluk

Nancowry Sub-Division

- Nancowrytaluk
- Kamortataluk
- Teressataluk
- Katchaltaluk

Great Nicobar Sub-Division

- Great Nicobar taluk (Campbell Bay)
- Little Nicobar taluk
- Little nicobar

Table 1 Economic Figures - Andaman and Nicobar Island

The below mentioned chart provides a trend of gross state domestic product (GSDP) of Andaman and Nicobar Islands at market prices, with figures in US \$ millions estimated by the Ministry of Statistics & Programme Implementation.

Year	USD (\$) million
1980	11.77
1985	23.54
1990	42.20
1995	149.92
2000	212.33
2005	291.63

Andaman and Nicobar Islands' Gross State Domestic (GSDP) product for 2010 is estimated at US\$ 810 million with per capita income of US\$ 2,132 (and.nic.in).

The contribution of the services sector (is 49 %) was maximum followed by primary sector (is 17 %) and then by secondary sector (is 34 %). There is little manufacturing activity mainly contributed by wood processing which is also limited as a result of restriction on exploitation of forests.

Economy of Andaman and Nicobar Island

Andaman and Nicobar Islands have gigantic accumulation of regular assets. The angling business bolsters a real partition of the economy of Andaman and Nicobar islands. The sloping and plain agrarian terrains of Andaman and Nicobar Islands are imperative wellspring of wage for the provincial individuals of those zones. Regular vegetables, oilseeds, heartbeats, pepper, nutmeg, cinnamon are some extraordinary products developed here. Indeed, even the economy at Andaman and Nicobar Islands to some degree, relies on upon

the red oil, elastic, palm and cashew nut that are developed here insignificantly. Other significant businesses that are additionally an enormous patron to the Andaman and Nicobar islands' economy incorporate its handiworks industry, minerals and vitality assets. Indeed, even tourism is an enormous industry for the populace of Andaman and Nicobar Islands. This area is loaded with common marvels and the intriguing gathering of vegetation, which draw in travelers around the world. The endless visitor spots of Andaman and Nicobar islands bolster the tourism business of the spot.

The island overflows with rich green backwoods that are a storage facility of some uncommon mixture of verdures. Thus the timber business had come up into the island. Woodcrafts are exceptionally wonderful that additionally assumes an extensive part in the economy of Andaman and Nicobar islands.

Economic Advantage - Andaman and Nicobar Islands as an Investment Destination

Serene workplace and fitting lawfulness circumstance.

- Significant potential for interest in tourism industry owing to its broad beautiful magnificence(Reddy).
- Vast unexplored marine segment for worldwide business.
- There is potential for hardware & programming industry.
- The islands are deliberately situated close to worldwide exchange hallway.
- High literacy rate

Agriculture in the Andaman & Nicobar Island

Farming area accessible in Andaman and Nicobar Islands is extremely restricted and confined inside 6 percent of the aggregate region of this spot(and.nic.in). Because of the need to build the fruitfulness of this area, exceptional measures have been taken to convey experimental transformation to expand the creation capacity. Horticulture edits in Andaman and Nicobar Islands incorporate vegetables, which are developed amid summer season when the atmosphere is truly great for nourishment profit. The vegetable development of the Andaman and Nicobar Islands incorporates vegetables like radish, lobia, brinjal, women finger, poi, cucurbits, marsa, and so forth. Agribusiness of Andaman and Nicobar Island likewise creates vegetables like knolkhol, tomato, capsicum, cauliflower and so forth, which are essentially winter season vegetables.

Andaman and Nicobar Islands agribusiness has as of late incorporated the bumpy ranges to advance manor of distinctive flavors yields and natural products. The bumpy territories are best utilized for cultivation, with development of yields like coconut and organic products like pineapple, guava, jackfruit, mango, citrus foods grown from the ground extraordinary natural products extraordinarily found in this island. Farming movement likewise incorporates red oil palm, elastic, cashew nut development. A base measure of oilseeds and heartbeats development could be seen in Andaman and Nicobar Islands.

Handicrafts

Andaman and Nicobar Islands handiworks industry is basically indigent upon its shell makes. Shells of Andaman and Nicobar Islands are a standout amongst the loveliest and captivating items found here. They are some extraordinary animals of these islands, which are the benefits of these islands. The shell-created things of Andaman and Nicobar Islands craftsmanship industry appreciate appeal around the world. The wealth of little and huge shells in the beachfront territories have enticed the seaside individuals to humor themselves in the act of shell making. Accordingly Andaman and Nicobar Islands handiwork industry is a major monetary alternative for the neighborhood individuals. They gather the seashells and after that clean them and procedure them. In the wake of transforming they cut them in diverse sought shapes. Mostly shell making is defeated making enlivening things, adornments, table lights and so on. The shell handiworks industry in Andaman and Nicobar Islands is enormous economy plan of action for the workers of this area. At the same time because of the apprehension of sheer abuse of these regular recourses the legislature has banned a percentage of the fare business related with this specialty. Crafted works industry at Andaman and Nicobar Islands likewise appreciates timber and woodwork society. Andaman and Nicobar Islands additionally brags of a wide accumulation of timber species among which some fit in with uncommon families. They cut the timbers in distinctive sizes and in this way get ready basic items giving extraordinary structures to them. A mixed bag of furniture and different figures are made of these woods. The neighbourhood specialists produce brightening hand made excellent furniture, which are commendable for inside design(infrastructure).

Fishing Industry in the Andaman & Nicobar Islands

Angling industry is a huge winning system and an enormous backing to the economy of Andaman and Nicobar Islands. It's a huge method for procuring for the populace of this island and consequently numerous individuals are occupied with distinctive water related business. The island being encompassed by water gives an incredible aid to the angling business. Accordingly numerous other angling commercial enterprises have concocted their endeavors in this island. Fishes like mackerels, mullets, fish, sardines and flying fishes are found in wealth. other than these, seashells of diverse sizes and shapes are additionally found. Shark angling was likewise a prime centre of this industry. Angling Industry at Andaman and Nicobar Islands is a significant industry yet as of late a boycott has been put on the ceaseless murdering of ocean sharks. The islands have a selective monetary zone (EEZ) of.06 million sq. km, which is around 30 per cent of the nation's EEZ and blessed with the extraordinary marine living space(and.nic.in).Andaman and Nicobar Island is wealthiest in India as far as corals differing qualities.The yearly fishery capability of the islands (1.48 lakh tones) is around 3.8 percent of the fishery capability of the nation(and.nic.in).New water fish generation is additionally a vital marvel in the islands. There are around 1,676 minor watering system lakes. The primary angling apparatuses, which are utilized, are gill nets, snare and lines, long lines, cast nets, shore seines or the grapple nets.

Shipping in the Andaman & Nicobar Islands

Andaman and Nicobar is all situated to turn into India's 13th real port after the legislature passed a Shipping Ministry plan to this impact(and.nic.in). An Andaman and Nicobar Port Trust (A&NPT) will be made, with its home office at Port Blair. The current Port Management Board (PMB) at Port Blair will be disbanded and exchanged to the proposed A&NPT. The Andaman and Lakshadweep Harbor Works will be bifurcated and a part of its foundation will be exchanged to the recently framed port trust. All procurements of the Major Port Trusts Act, 1963, which apply to the nation's current dozen noteworthy ports, will be stretched out to the new port power. In feeling of numerous specialists with the arrangement of the new port, it will essentially help in the financial advancement of the Andaman and Nicobar Islands(Singh, 2007).

Potential Areas of Investment in the Shipping.

There is an incredible potential for the holder port industry.

- This offers the islands a chance to grow as a trans-shipment port.
- The administration has underscored the foundation of bunkering office and dry dock alongside the foundation of load vessels and traveler administration.

India plans to build trans-shipment port on Nicobar

India wants to construct a trans-shipment port at South Bay on Great Nicobar Island, an advancement that could be of both business and vital importance to Southeast Asia. The thought is to make a center point for transportation organizations with spokes transmitting toward the eastern seaboard of India, Bangladesh, Myanmar and Thai ports on the Andaman Sea. Currents arranging accommodates a berthing office of an unassuming 3.2 million TEUs by 2015, ascending to 7.4 million TEUs by 2020. Should the undertaking take off, India hopes to manufacture limit of 17.2 million TEUs by 2020. (Source <http://www.cargonewsasia.com/secured/article.aspx?id=3&article=23757>)

Industries in Andaman and Nicobar Islands

According to the 2008, there were 1,833 enlisted little scale commercial enterprises. Absolute venture was US\$ 3.85 million (INR 173.272 million) and a job of 8,658 persons.

Table 2 Industry Snapshot during 2008

Sl. No.	Particulars	Total No's.
1	Large & Medium Scale Industries	5
2	Small Scale Industrial Units	1,868
3	Industrial Training Centre	14
4	Industrial Estates	8

(Source: <http://www.and.nic.in>)

Table 3 Categorization of the Industrial Units and its percentage share.

Type of the Units	Total	Percentage (%)
Wood based Industries	243	13.28

Agro based Industries	137	7.47
Marine based Industries	65	3.54
Food based Industries	142	7.74
Mineral based Industries	93	5.07
Chemical based Industries	48	2.61
Engineering based Industries	356	19.43
Leather based Industries	9	0.49
Textile based Industries	126	6.87
Coir based Industries	3	0.17
Misc. based Industries	611	33.33
Total	1833	100

(Source: <http://www.and.nic.in>)

Background of the Problem

- To make the food grains available for the people of Andaman & Nicobar Islands who are in the most remote areas where there is no proper mode of transportation is available till date.

Significance of the Problem

- Saving the primitive tribes of our islands, this is very important for our country. It is the major reason behind this food grains supply and providing necessary infrastructure to live in.
- Andaman & Nicobar islands are strategically and culturally very important place in our country.
- As it is a matter of importance to have our people residing in the islands which are in our own territory. Already there is an eye of China on these islands to set up there Navy Base.

Literature Review

1. "A Study of Procurement and Logistics with specific reference to power Infra structure project in Andaman & Nicobar ", Harpreet Singh, 2008.
In this paper, a live project was taken to study the existing procedures related to procurement and its logistics and to explore, suggest and implement the various new ideas so as to complete the power infrastructure project of Andaman & Nicobar islands profitably.
2. "Mega Tourism in Andaman and Nicobar Islands: Some Concerns", Sunitha Reddy, 2007. This paper has shown the post situation of Tsunami, which has changed the lives of thousands of people since it struck. It discussed about the infrastructure which was left out after that natural calamity and process of reconstruction taking place.
3. "Interim Report Andaman & Nicobar Islands", ILFS infrastructure, 2012. The study in this paper shows the report which provides information on prospective projects in the circuits that can be taken up for infrastructural up gradation in Andaman & Nicobar Islands tourism.

Research Gap

- The transportation of project cargo was discussed in one of the above papers which is a completely different from food grains transportation to these islands.
- The process of reaching the most remote places like Chowra and Teressa in Andaman & Nicobar Islands to supply the food grains remained untouched by most of the authors.

Research Objective

- To make the flow of food grains supply smooth for the people of Andaman & Nicobar Islands on time to time basis without any transportation bottle necks.

Research Methodology

- Primary Research – Qualitative. Collection of the facts and figures of the project from on field with various factors taken into the consideration.
- Secondary Research – Quantitative. Taking the various gaps into account, which are faced by the companies in the supply of similar cargo
- Collection of the yearly trend of the shortages from the predecessor company, which are seen after the delivery of goods at the respective PDC's.

The Multimodal transportation of food grain from Visakhapatnam to Port Blair & 12 PDC's in Andaman & Nicobar Islands

In this current project, the multimodal transportation of food grains from Visakhapatnam to Andaman & Nicobar Islands – Port Blair & other 12 PDC's. The Food Corporation of India delivers the food grains at the designated depots in Visakhapatnam and the contractor has to deliver the food grains at the 12 PDC's & FCI Depot, Port Blair in A&N Islands. Civil Supply Department will be receiving on behalf of FCI at the 12 PDC's in A&N islands.

Food Corporation of India

- Food Corporation of India was set up on 14 January 1965, now having a largest food grains supply chain management in Asia (2nd in the world).
- Each year, the Food Corporation of India purchases roughly 15 to 20 per cent of India's wheat output and 12 to 15 per cent of its rice output.
- The concept of Public Distribution System in the country was evolved around 1942 due to shortage of food grains during 2nd World War.
- Public Distribution System strives to meet the twin objectives - the price support to the farmers for their product and maintenance of stocks.

Civil Supply Department

The Directorate Of Civil Supplies and Consumer Affairs is working in these Islands from the day of occupation and settlement by the British Government. Prior this Department was known as Supply Department and was working from Ross Island. Without open business amid preindependent days and constrained merchants, nourishment grains, fundamental items

and family procurements were supplied by this Department. After Independence, with the open showcasing by dealers, managing a wide range of consumable things including heartbeats, oils etc.,the obligation of office moved from supplies to authorization of different Acts and Orders of Government of India. Presently the Department essential obligation is to guarantee the accessibility of sustenance grains, screen business costs, administer dealers exercises & make purchaser mindfulness.

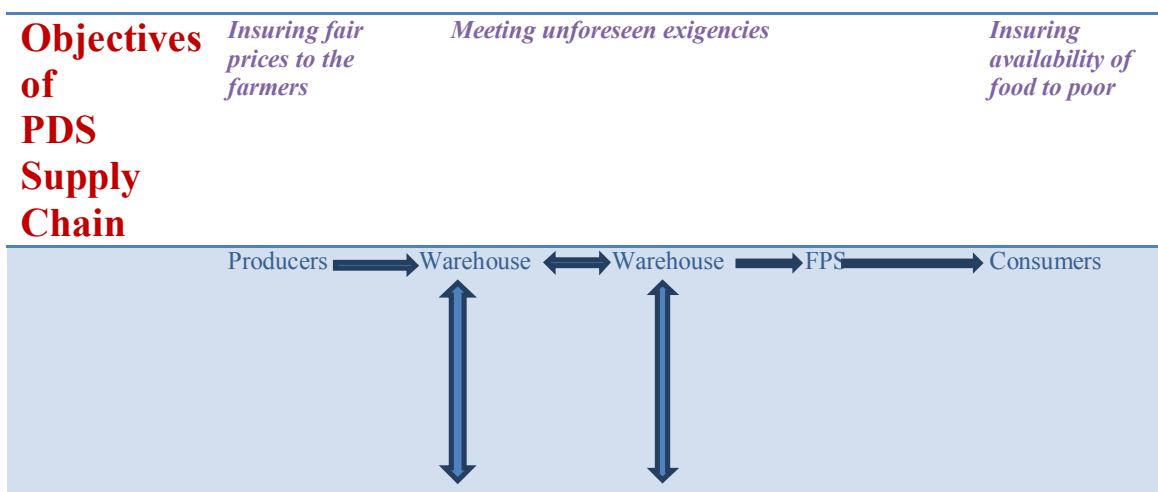
Major limitations

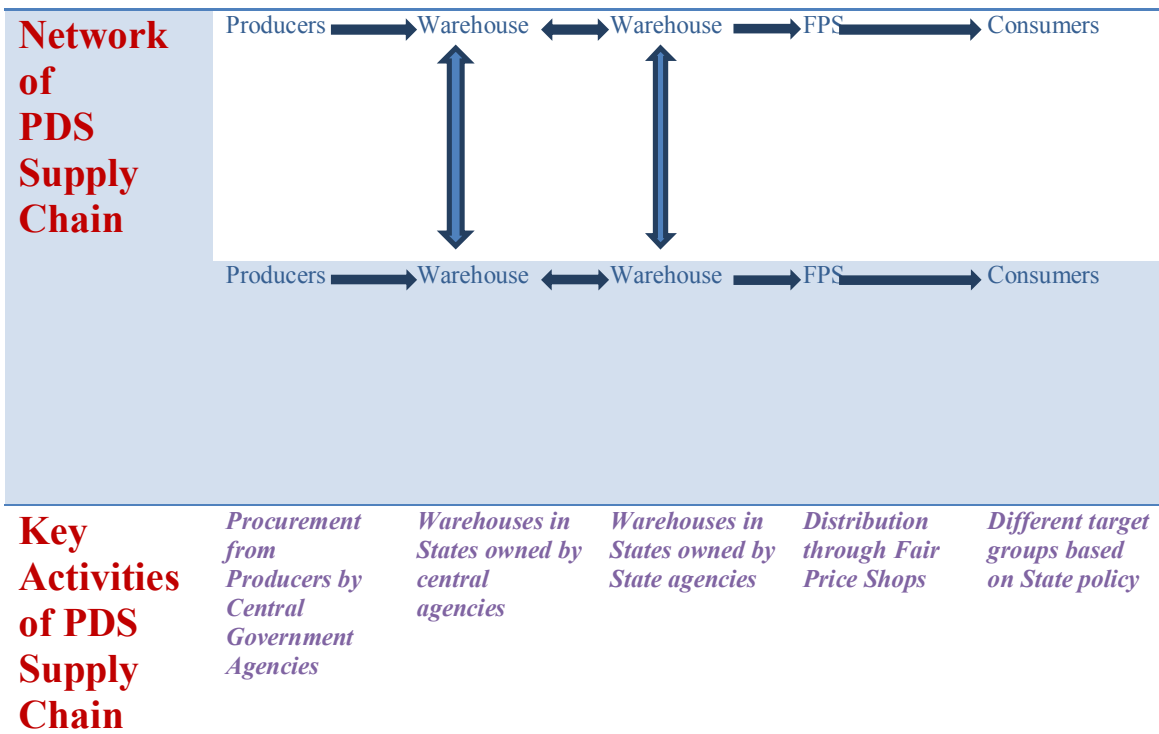
Real limits in this venture are given underneath

1. No past experience to handle such kind of venture
 2. Constrained no of alternatives accessible.
 3. Just two fundamental administration suppliers accessible.
 4. Different method of transport (land and ocean) included.
 5. All the more no of supply focuses over everywhere throughout the India.
- We are moving forward and making this quote true, “No Terrain too harsh for us, to bring food grains to you.”

Table 4

Flow of food grains in PDS supply chain





Visakhapatnam Port Trust

- Government Port
- No warehouse available (lead to demurrage)
- Dock Labor Board (DLB), the permanent labor in the port
- The datum of work and wage is fixed for the shift
- But they demand for an extra payment other than their wage.
- High handling cost
- Companies shifting towards private ports



Figure 2 Handling at Visakhapatnam Port Trust

The cost of spillage should be considered by any company before taking up the project with an organization like Food Corporation of India which deducts the double the amount of the economic value of the shortage seen and on top of it, also deducts the freight of the cargo shortage.



Figure 3 A typical View in the Vessel's Hold



Figure 4 Handling with the shore crane in VPT

PORT MANAGEMENT BOARD – Port Blair

A&N Islands are arranged 720 NM from the territory and the coast line of A&N Island is 1962 Kms. The A&N Islands are a chain of Islands measuring more than 900 Kms. from North to South. Out of the aggregate 572 nos. of little & huge Islands just 36 are occupied. Preceding freedom the unparalleled wooden pier at Chatham was used for berthing of vessels and was kept up by the backwoods office. In 1952 as far as possible were stretched out to five ports of A&N Islands viz. Mayabunder, Port Blair, EliphinstoneHarbor, Car Nicobar and Nancowary. Then again, till mid sixties there were scarcely any port offices accessible at these ports in genuine terms. In 1981, GOI launched activity to rearrange port setup and a Port Management Board for Administration and Management of Ports & Harbors in A&N Islands was constituted. The Port Management Board, in any case, started to be with impact from April 1989. The Port Management Board is in charge of organising and overseeing every port activities in the domain, fundamentally to give traveler delivering in the Mainland - Islands and Inter Island Sectors giving indispensable integration even to the remotest Islands. Port Management Board deals with 23 ports spread over the Islands and out of those 23 ports 9 ports are proclaimed as wharfage ports and payload related charges are exacted. In all the nine freight taking care of ports vessels between 5 mtrs. furthermore, 9 mtrs. draft are berthed and gave obliged port offices. The compartment administration was presented in July 1992 and is getting to be prominent. A holder terminal to handle 70 holders at once was built at Port Blair and now, with the expanded compartment activity, more than 250 compartments are taken care of at one go. Port Blair Harbor has a different compartment for taking care of risky freight at Hope Town. With the dispatching of LPG packaging plant of IOC, the LPG tankers will be berthed at Hope Town.



Figure 5 Haddo Wharf in the Port Blair Jetty

The bunkers in Port Blair are cheapest in the entire country. Therefore we can see the cost cutting in the bunker cost of the vessel in this supply of food grains.



Figure 6The availability of cheapest bunkers in Port Blair

Average demands of the commodities in Andaman & Nicobar Islands

Table 5For Wheat

Sl.No	Name of the Distribution Centre	Average quantity demanded (in MT)
1	Ranagat	152.4
2	Mayabunder	76.2
3	Diglipur	101.6
4	Hutbay	51.8
5	Katchal	36
6	Port Blair	396
Total (I)		813 MT

Table 6For Rice

Sl.No	Name of the Distribution Centre	Average Quantity demanded (in MT)
1	Ranghat	254
2	Mayabunder	61
3	Diglipur	204
4	Hutbay	101

5	Havelock	35
6	Campel Bay	101
7	Chowra	41
8	Teressa	41
9	Katchal	50
10	Kamorta	101
11	Port Blair	1198
Total (II)		2191 MT
For wheat & rice (I + II)		
Grand total		3004 MT

The vessel from Visakhapatnam sails with an average quantity of 3000 MT of food grains to serve the population of Andaman & Nicobar Islands.

The Food Corporation of India does not have any warehouses or any other offices in the 15 centres other than Port Blair which they have mentioned. It is the Civil Supplies Board (Cooperative Civil Supplies) who collects the food grains on behalf of FCI and supplies those goods to the people here in Andaman & Nicobar Islands. The Civil supply board has their own stores in all the distribution centres which were mentioned by FCI in the contract. Therefore it will be the representative of CCS who will be receiving the food grains at the various destinations at their stores.

Civil Supplies Distribution Centres in Andaman & Nicobar Islands are basically divided into two major groups:-

1. Andaman Group
2. Nicobar Group

Andaman is divided into 3 parts

- a) North Andaman
- b) Middle Andaman
- c) South Andaman

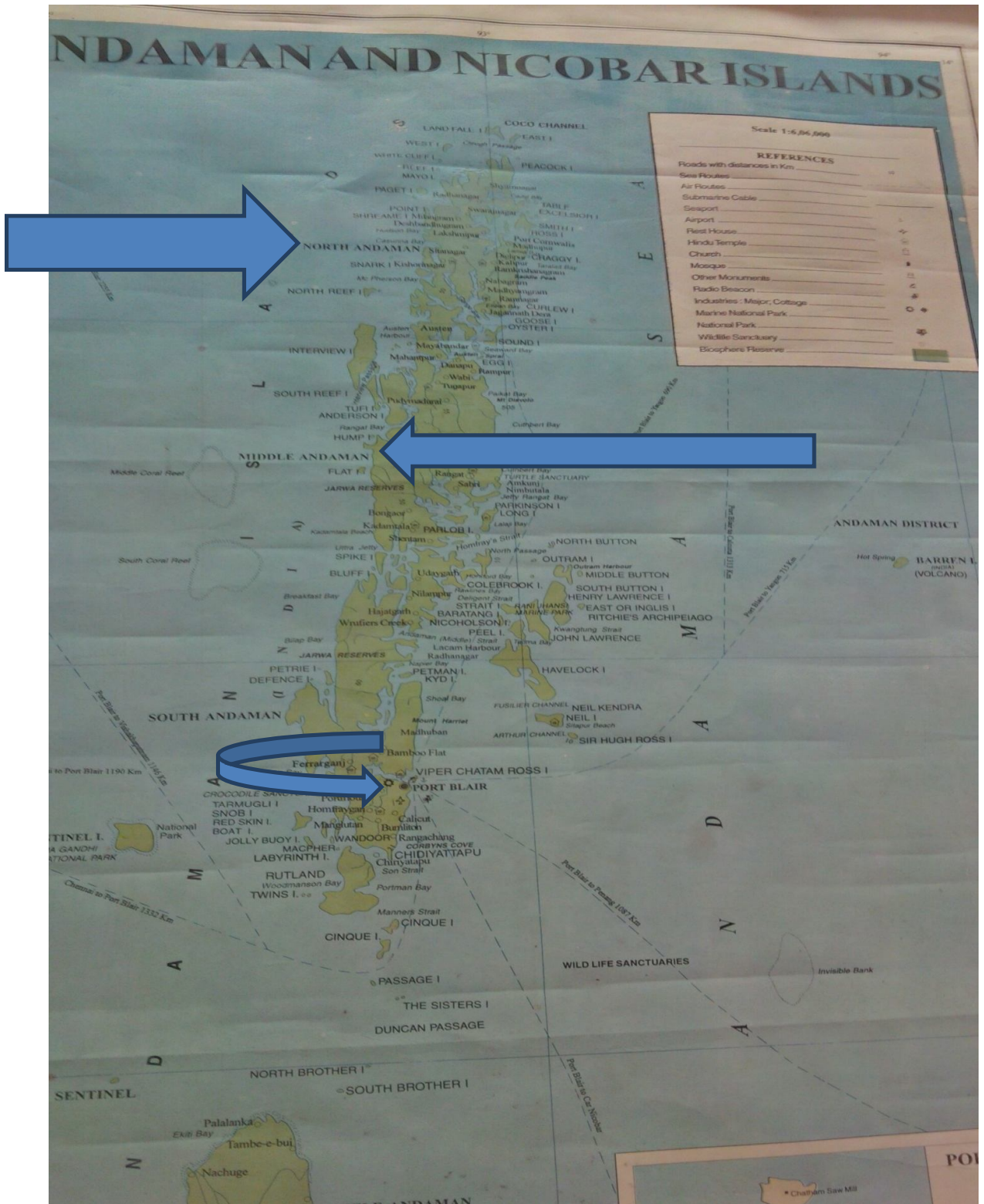


Figure 7 Andaman Group of Islands

Nicobar Group has the islands like:-

- i. Hutbay

- ii. Car Nicobar
- iii. Chowra
- iv. Teresa
- v. Katchal
- vi. Kamorta
- vii. Campbell Bay

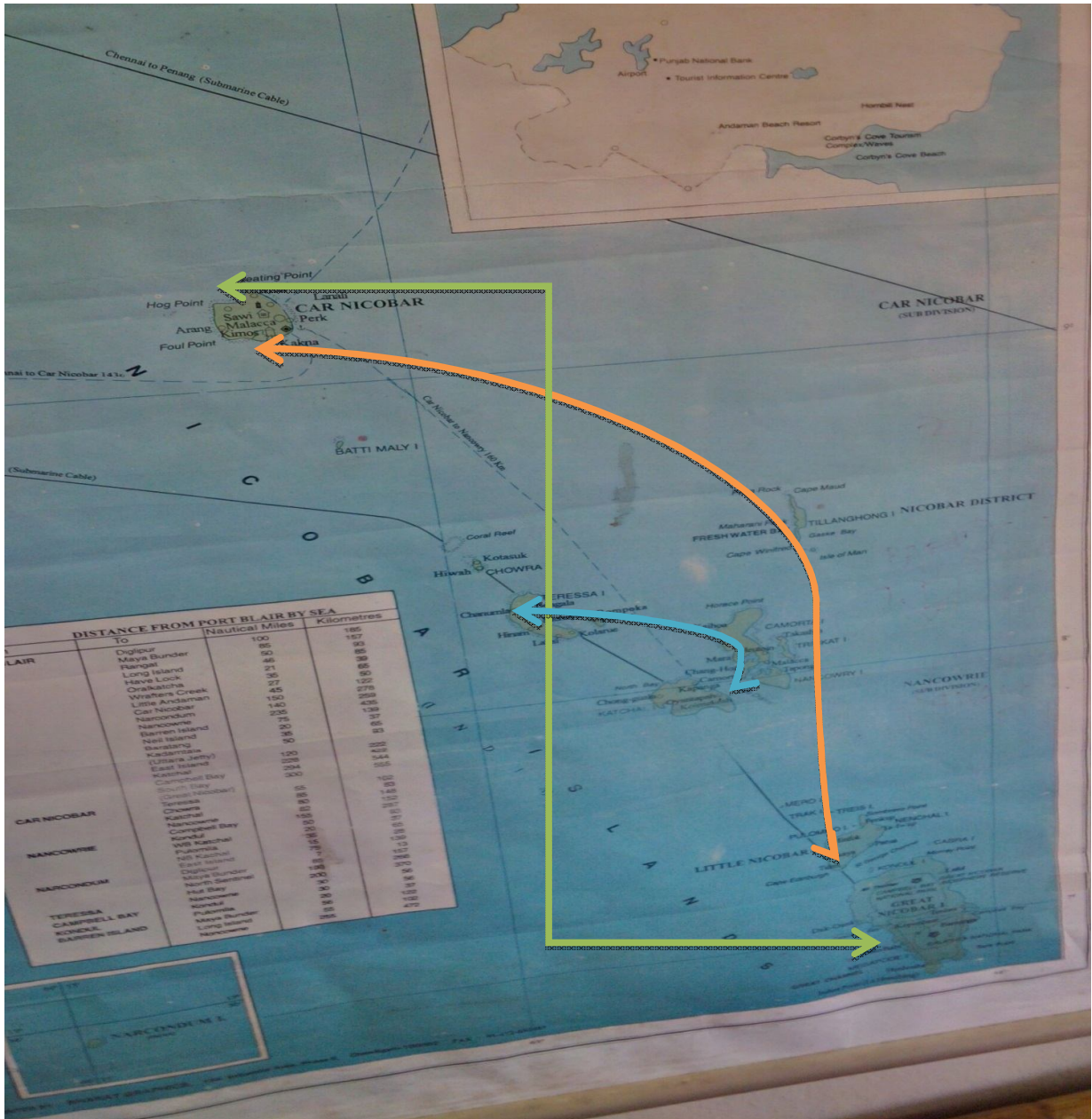


Figure 8 Nicobar Group of Islands

There is a 10 degree channel between Andaman Islands and Nicobar islands in which sailing becomes very tough for the smaller ships. As there are very high tides seen overthere, due to which the small ship companies does not show any kind of interest to cross that channel.

As per the information gathered, there are few points in the list of distribution centres mentioned by FCI in the contract, which does not even have a small jetty.

The distribution centres which does not even have jetty points are:-

1. Teresa
2. Chowra
3. Katchal
4. Pulimillow
5. Pillohabhi
6. Kondul



Figure 9 PDC's where the island doesn't have jetty

These above mentioned centres are pretty tough places for delivering the food grains.

The Little Andaman (Hutbay) is a distribution centre among the list of 16 centres, which has highest frequency of small cargo ships available in the Port Blair Jetty market. Almost every small ship owning company are ready to carry the cargo to this place.



Figure 10 Little Andaman

About other islands:

All the distribution centres which are mentioned by FCI in the tender are not easy and safe places to visit. There are many islands where the normal people can't even place their foot

and we are not allowed to go to all the islands. We are required to present a permission letter (which will be issued by Deputy Commissioner only with a valid reason) at the jetty to enter into that island.

Islands which are very tough and unsafe to go

1. Chowra
2. Teressa
3. Katchal
4. Kamorta
5. Nicobar

To enter in any of these islands, we need to present a “Tribal Landing PASS” at the jetty itself. This information was given by almost all the shipping companies and the local people here at Port Blair.

Table 7 Civil Supply Godown wise capacity in the islands mentioned

Sl.No	Name of the PDC	Godown Capacity (in MT)	PDC Wise Monthly Requirement (in MT)	
			Rice	Wheat
1	Ranghat	600	165	60
2	Mayabunder	450	134	56
3	Diglipur	1000	170	58
4	Hutbay	600	114	51
5	Car Nicobar	600	144	0
6	Kamorta	500	26	8
7	Katchal	580	14	4
8	Teressa	250	14	0
9	Chowra	150	11	0
10	Havelock	200	25	12.5
11	Neil	100	20	8
12	Campel Bay	550	53	23
13	Port Blair	6760	1036	620
Total		12340	1926	900

PDC’s where no jetty is present

- Chowra
- Teressa
- Katchal
- Pillowmillow
- Pillobhabhi
- Kondul

Only punton jetty is present, even the smaller ships can't even touch the jetty edge. So the punton has to be pulled and brought to the ship, by a small wooden boat. And all the bags will be unloaded on this punton only and should be taken to the shore.

While pulling the punton jetty which is loaded by food grain bags with the small wooden boat, there can be damage for the food grain bags. There can be spilling of salted ocean water on the food grain bags, which may not be accepted by Civil Supply Board.

PMB Charges

- For 6 MT capacity shore crane – INR 450/- per shift
- For 25 MT capacity shore crane- INR 1490/- per hour
- For 25 MT capacity mobile shore crane – INR 2020/- per hour
- Port Wharf age charges – INR 20/- per MT.

Congestion at Haddo Wharf

Due to the space congestion in the Port Blair, Haddo Wharf getting a warehouse for storing the cargo is very tough. All that is available for the storage is a transit shed, in which a limited period of storage is allowed. A free time of 3 days is given for the cargo to get it cleared, then immediately after this 3 days the demurrage charges will be levied on the Contractor.

All the logistics related activities are to be divided into following parts, such as

- a. The Logistics strategy formulation,
- b. Short listing & selection of channel partners,
- c. Finalization of the scope of activities
- d. Finalization of monitoring mechanism, etc.
- e. Implementation of logistic methodology.

Figure 11 Road route to Rangat, Mayabunder & Diglipur



In Order to reach Rangat

- From the South Andaman (Port Blair) we have to head towards north for 40 kms to reach a point; where a gate will be present and will be opened from 6.00 am to 5.00 pm only & will be only sent on a frequency of every 03.00 hours.
- There are very strict rules followed by the government here, as there are Jarawa People (A remote tribe of Andaman) present at a stretch of 45 kms in the en-route.
- All the vehicles are sent in a convoy from 6.00 am (then 9.00 am , 12.00 pm, 3.00 pm, 5.00 pm) on every day.
- This mainly to save the people from the tribes & to save the tribes from people (vice-versa).In the previous years, the drivers and the tourists who were travelling in this route are attacked and were killed by this Jarawa Tribe.
- This Jarawa people are very primitive tribe of Andaman islands, who do not wear clothes and eats raw flesh. They cannot understand our language nor the culture of developed humans.
- After crossing this tribal stretch, we have to cross a water barrier present in between south Andaman & Middle Andaman.



Figure 12 Water Barriers on the National Highway



Figure 13 Ferry Carrying the vehicles to cross the water body



Figure 14 Vehicles getting down from the Ferry



Figure 15 Cargo Vehicles less prioritized over the passenger vehicles in using the Ferry services

- We have to cross the water barrier twice, as the islands are not inter-connected. The waiting at the ferry is very high. Even the shorter distances which are need to be covered in these islands can take a very long time.
- The priority list of vehicles for the ferry entrance:-
- Priority 1: Official Vehicles (Forest Department Vehicles)
- Priority 2: STS vehicles
- Priority 3: Indian Oil container trucks
- Priority 4: LPG trucks
- Priority 5: Tourist Vehicles
- Priority 6: Other Cargo vehicles

Visit to Diglipur

- The Diglipur PDC is among the top 4 food grain demanded centres in Andaman & Nicobar islands.
- The food grains which are to be delivered at Rangat, Mayabunder&Diglipur will be discharged at Mayabunder Jetty.
- The Mayabunder jetty would be a centre point for both Rangat&Diglipur PDC's.
- Distance between Mayabunder jetty &Rangat PDC = 76 kms
- Distance between Mayabunder jetty &Diglipur PDC = 79 kms
- Though there are jetties present at Rangat&Diglipur locations, taking our vessel to these jetties will not be profitable. As the demand of food grains are 250 MT each at these stations. The total requirement of these three stations should be discharged at Mayabunder jetty or Diglipur jetty basing on the consignment to be transported at these locations.

- The jetty in Mayabunder is pretty big, which can accommodate 2 medium size Ocean Vessels (<5000 MT) so the availability of berth does not become a problem at Mayabunder Jetty. Therefore, arrival of the vessel to the berth in the jetty can be immediate in most cases.
- All the information and processes regarding the vessel have to be applied and filed at the Port Management Board in Port Blair Jetty.

Diglipur Jetty

- The Arial Bay jetty is the closest jetty for Diglipur PDC. And this jetty is 9 kms away from the Diglipur town.



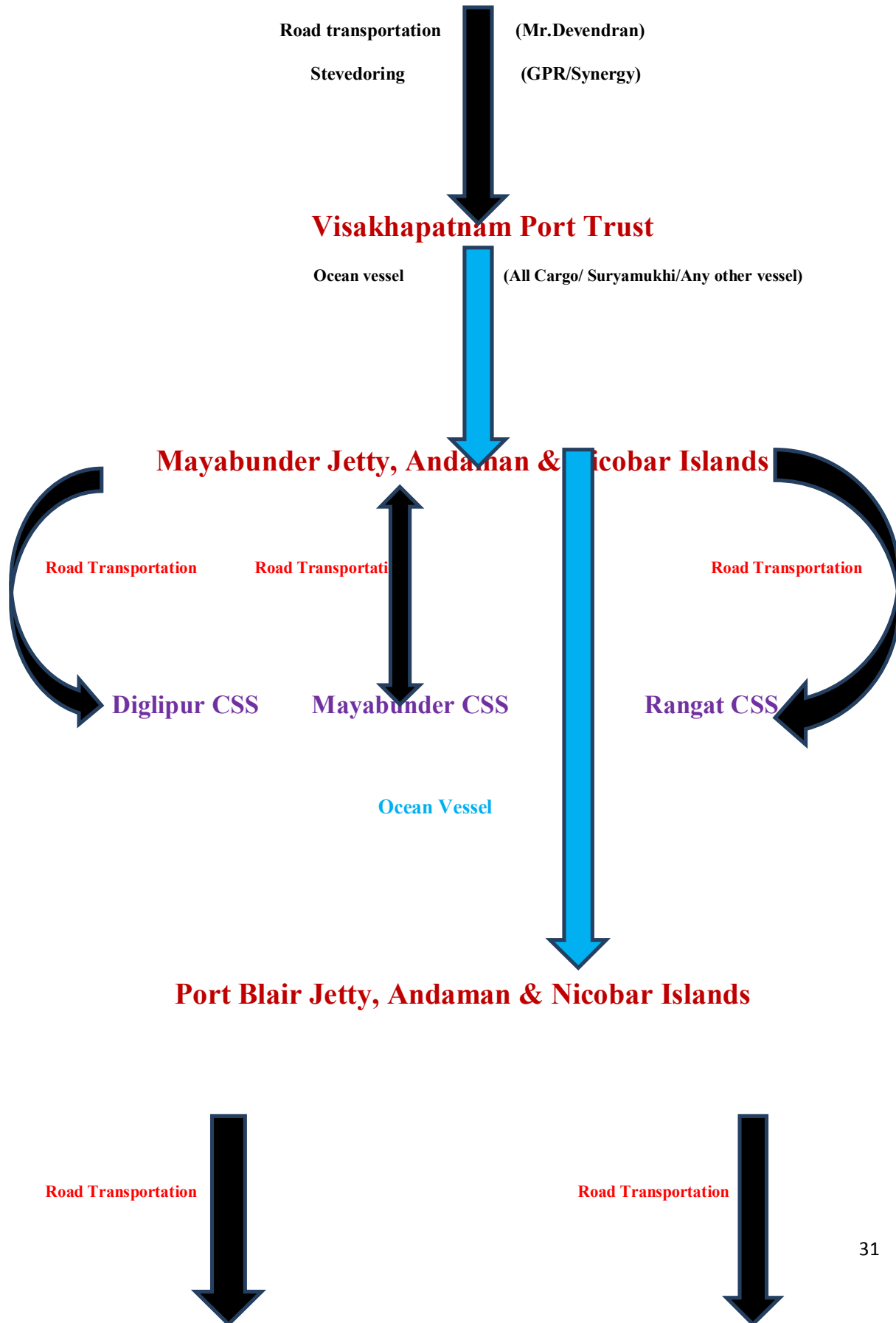
Figure 16 Arial Bay jetty in Diglipur

Note

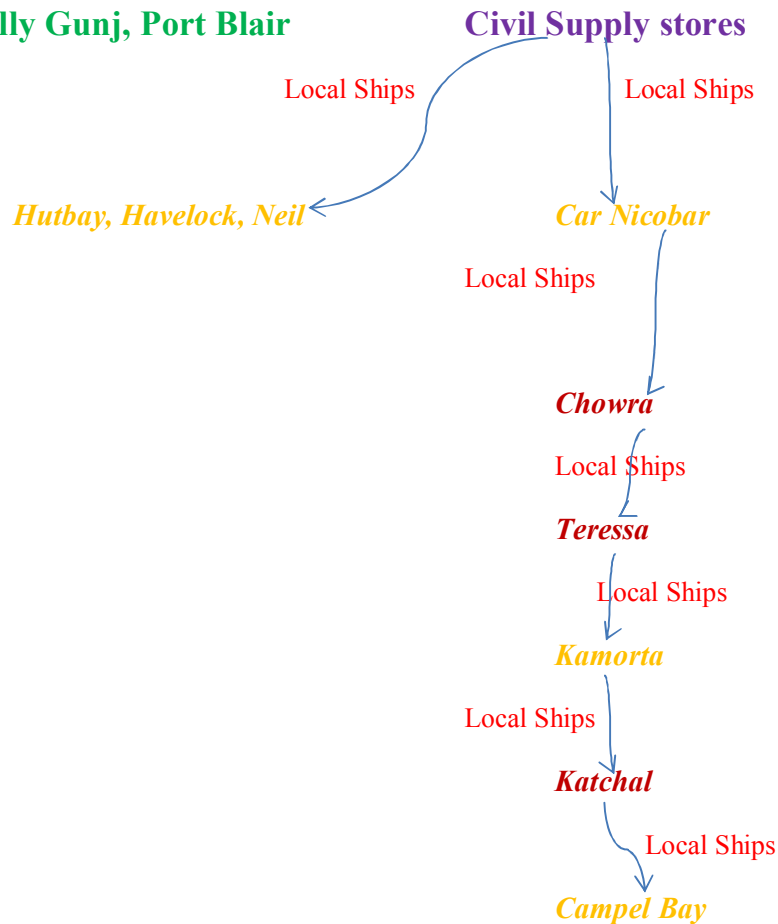
While unloading the bags from the truck, there will be a couple civil supply officials present who will be examining the bags which are brought down. The bag which appears to be loose will be put aside by the Civil Supply Officers, later those loose bags will be weighed on the small weighing machine which is available at the Godown. If the bags which have been put aside by the Civil supply officer are weighing less than 50 kgs then it will be treated as shortage. All the Civil Supply officers (Godown in charge) are always behind some facilitation payments (bribery) from shipping contractor. This information was given by the labour contractor and the transporter too.

Overview of the operations

FCI Main Depot, Gnanapuram , Visakhapatnam



FCI Godown, Dolly Gunj, Port Blair



There are two categories of ship companies available for our food grain Inter Island transportation (Small Ships & Large ships). The types of ships present :

1. M.S Companies (Motor Ship)
2. M.S.V Companies (Motor Stand-by Vessel)
3. M.V Companies (Motor Vessel)

The Small ship companies have the M.S & M.S.V and the large ship companies have the M.V.

The M.V. ships are the only ships which are allowed by PMB (Port Management Board) to pass the ten degree channel which separates Andaman Group of Islands and Nicobar Group of Islands.

Therefore for a period of 6 months in a year, we got to work with the large ship companies for sure in order to reach the Nicobar Group of Islands (Southern group). In the remaining 6 months all the other small shipping companies will be sailing to Southern group too, we can have many options in that time period.

The Small Ship companies whom we have approached:

- I. Quinn Shipping
- II. Island Tradelinks
- III. S.B.K Shipping
- IV. Star Agencies
- V. H.F Shipping

The Large Ship companies whom we have approached:

- I. Sakti Group
- II. Mak Logistics Pvt Ltd
- III. E.H.L Shipping

Cost Analysis of the project

For “Door to Door” service the operational costs involved are mentioned below:

Sector -1(Costs at Visakhapatnam & ocean freight to Jetty in Port Blair/ Mayabunder)

1. Labour charges at FCI Godown, Visakhapatnam = INR 24.00 per MT
 2. Transportation of food grains from FCI Godown to Visakhapatnam Port Trust = INR 120.00 per MT
 3. Receiving the food grains & On-Board Stevedoring = INR 414.00 per MT
 4. Sea freight- From Visakhapatnam to Mayabunder/ Port Blair =
- Total = INR 558.00 per MT + (Sea Freight)**

Sector-2(For Mayabunder/ Diglipur/ Rangat)

1. On Board Stevedoring – Unloading from ship, Jetty Stacking, Truck Loading = INR 200.00 per MT
- Total = INR 200.00 per MT**

Sector- 3(For Port Blair)

2. On Board Stevedoring – Unloading from ship, Jetty stacking = INR 90.00 per MT

3. Loading onto the truck at Haddo Jetty = INR 65.00 per MT
- Total = INR 155.00 per MT**

Sector -4(For all other inter islands transportation)

4. On Board Stevedoring- Unloading from ship, Jetty Stacking = INR 90.00 per MT
 5. Unloading at the Haddo wharf = INR 65.00 per MT
 6. Loading into Truck at Haddo Jetty, Unloading at Chatham Wharf and Boat Loading = INR 120.00 per MT
 7. Truck Charges from Haddo Wharf to Chatham = INR 70.00 per MT
- Total = INR 345.00 per MT**

The minimum direct costs for the company in this project for each PDC are furnished below:-

For Port Blair PDC:- 1

1. For Sector – 1 = INR 558.00 per MT + Sea Freight
2. For Sector – 3 = INR 155.00 per MT
3. Local Handling
 - Truck freight = INR 120.00 per MT
 - Unloading Charges at PDC = INR 80.00 per MT

Grand Total = INR 913.00 per MT + Sea Freight

For Mayabunder PDC:- 2

1. For sector-1 = INR 558.00 per MT + Sea Freight
2. For sector- 2 = INR 200.00 per MT
3. Local Handling
 - Truck freight = INR 130.00 per MT
 - Unloading Charges at PDC = INR 100.00 per MT

Grand Total = INR 988.00 per MT + Sea Freight

For Rangat PDC:-3

1. For Sector -1 = INR 558.00 per MT + Sea Freight
2. For sector- 2 = INR 200.00 per MT
4. Local Handling
 - Truck freight = INR 630.00 per MT
 - Unloading Charges at PDC = INR 130.00 per MT

Grand Total = INR 1518.00 per MT + Sea Freight

For Diglipur PDC:-4

- 1) For sector-1 = INR 558.00 per MT + Sea Freight
- 2) For sector- 2 = INR 200.00 per MT
- 3) Local Handling
 - Truck freight = INR 700.00 per MT
 - Unloading Charges at PDC = INR 110.00 per MT

Grand Total = INR 1568.00 per MT + Sea Freight

For Hut Bay PDC:-5

- 1) For sector-1 = INR 558.00 per MT + Sea Freight
- 2) For sector -4 = INR 345.00 per MT
- 3) Sea Freight (A&N) = INR 900.00 per MT
- 4) Local Handling
 - Door Delivery = INR 460.00 per MT

Grand Total = INR 2263.00 per MT + Sea Freight

For Havelock PDC:-6

- 1) For sector – 1 = INR 558.00 per MT + Sea Freight
- 2) For Sector- 4 = INR 345.00 per MT
- 3) Sea Freight (A&N) = INR 650.00 per MT
- 4) Local Handling
 - Door Delivery = INR 720.00 per MT

Grand Total = INR 2273.00 per MT + Sea Freight

For Neil PDC:-7

- 1) For sector – 1 = INR 558.00 per MT + Sea Freight
- 2) For Sector- 4 = INR 345.00 per MT
- 3) Sea Freight (A&N) = INR 650.00 per MT
- 4) Local Hnadling
 - Door Delivery = INR 720.00 per MT

Grand Total = INR 2273.00 per MT + Sea Freight

For Car Nicobar PDC:-8

- 1) For sector – 1 = INR 558.00 per MT + Sea Freight

- 2) For Sector- 4 = INR 345.00 per MT
- 3) Sea Freight (A&N) = INR 1500.00 per MT / INR 2400.00 per MT (Small Ship/ Large Ship)
- 4) Local Handling
 - Door Delivery = INR 650.00 per MT

Grand Total = INR 3053 per MT +Sea Freight (In case of small ship)
= INR 3953 per MT + Sea Freight (In case of large ship)

For Kamorta PDC:-9

- 1) For sector – 1 = INR 558.00 per MT + Sea Freight
- 2) For sector – 4 = INR 345.00 per MT
- 3) Sea Freight (A&N) = INR 2200.00 per MT/ INR 2500.00 per MT (Small Ship/ Large Ship)
- 4) Local Handling
 - Door Delivery = INR 760.00 per MT

Grand Total = INR 3863.00 per MT + Sea Freight (In case of small ship)
= INR 4163.00 per MT + Sea Freight (In case of large ship)

For Katchal PDC:-10

- 1) For sector – 1 = INR 558.00 per MT + Sea Freight
- 2) For sector – 4 = INR 345.00 per MT
- 3) Sea Freight (A&N) = INR 1900.00 per MT/ INR 2800.00 per MT(Small Ship/ Large Ship)
- 4) Local Handling
 - Door Delivery = INR 875.00 per MT

Grand Total = INR 3678.00 per MT + Sea Freight (In case of small ship)
= INR 4578.00 per MT + Sea Freight (In case of large ship)

For Chowra PDC:-11

- 1) For sector – 1 = INR 558.00 per MT + Sea Freight
- 2) For sector – 4 = INR 345.00 per MT
- 3) Sea Freight (A&N) = INR 1900.00 per MT/ INR 3000.00 per MT (Small Ship/ Large Ship)
- 4) Local Handling
 - Door Delivery = INR 6675.00 per MT

Grand Total = INR 9478 per MT + Sea Freight (In case of small ship)
= INR 10578 per MT + Sea Freight (In case of large ship)

For Teresa PDC:-12

- 1) For sector – 1 = INR 558.00 per MT + Sea Freight

- 2) For sector – 4 = INR 345.00 per MT
- 3) Sea Freight (A&N) = INR 1900.00 per MT/ INR 3000.00 per MT (Small Ship/ Large Ship)
- 4) Local Handling
 - Door Delivery = INR 6675.00 per MT

Grand Total= INR 9478 per MT + Sea Freight (In case of small ship)

= INR 10578 per MT + Sea Freight (In case of large ship)

For Campbell Bay PDC:-13

- 1) For sector – 1 = INR 558.00 per MT + Sea Freight
- 2) For sector – 4 = INR 345.00 per MT
- 3) Sea Freight (A&N) = INR 2800.00 per MT
- 4) Local Handling
 - Door Delivery = INR 900.00 per MT (approx..)

Grand Total = INR 4603.00 per MT+ Sea Freight (approx.)

Conclusions

The Government of India is almost spending 1/3rd of the economic cost of the food grains on the transportation cost. The government is spending a very huge amount on similar kind of projects working for the development of these remote islands.

In few PDC's like Chowra&Teressa, where the total number of population is less than 5000 members and does not have a jetty to allow the berthing of the ship. For these PDC's the Delivery cost of food grains of 1 Metric ton from Visakhapatnam is above INR 10578/- per MT (Cost of those food grains are INR 30160/- per MT) which is almost 1/3rd of Economic cost.

- Building a jetty at these smaller islands like Chowra&Teressa can reduce the transportation cost.
- And the damage of the food grains can be controlled.
- Government can start the stevedoring services at these islands, where the current stevedore has a monopoly now.

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