ALTERNATIVE METHODS OF HANDLING DRY BULK CARGO IN KUANTAN PORT

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About this Presenter:

54-year old and has been working in Kuantan Port since 1980 or for the past 35 years. A government servant with Kuantan Port Authority and opted to retire during privatisation of the port and join Kuantan Port Consortium Sdn Bhd , the operator of Kuantan Port.

A chartered member of Chartered Institute of Logistics and Transport, UK and holds a Master's degree in Business Administration from a university in Malaysia.

Current post is General Manager in charge of Administration, Marketing and Corporate Services, Research and Development and Security departments in KPC.

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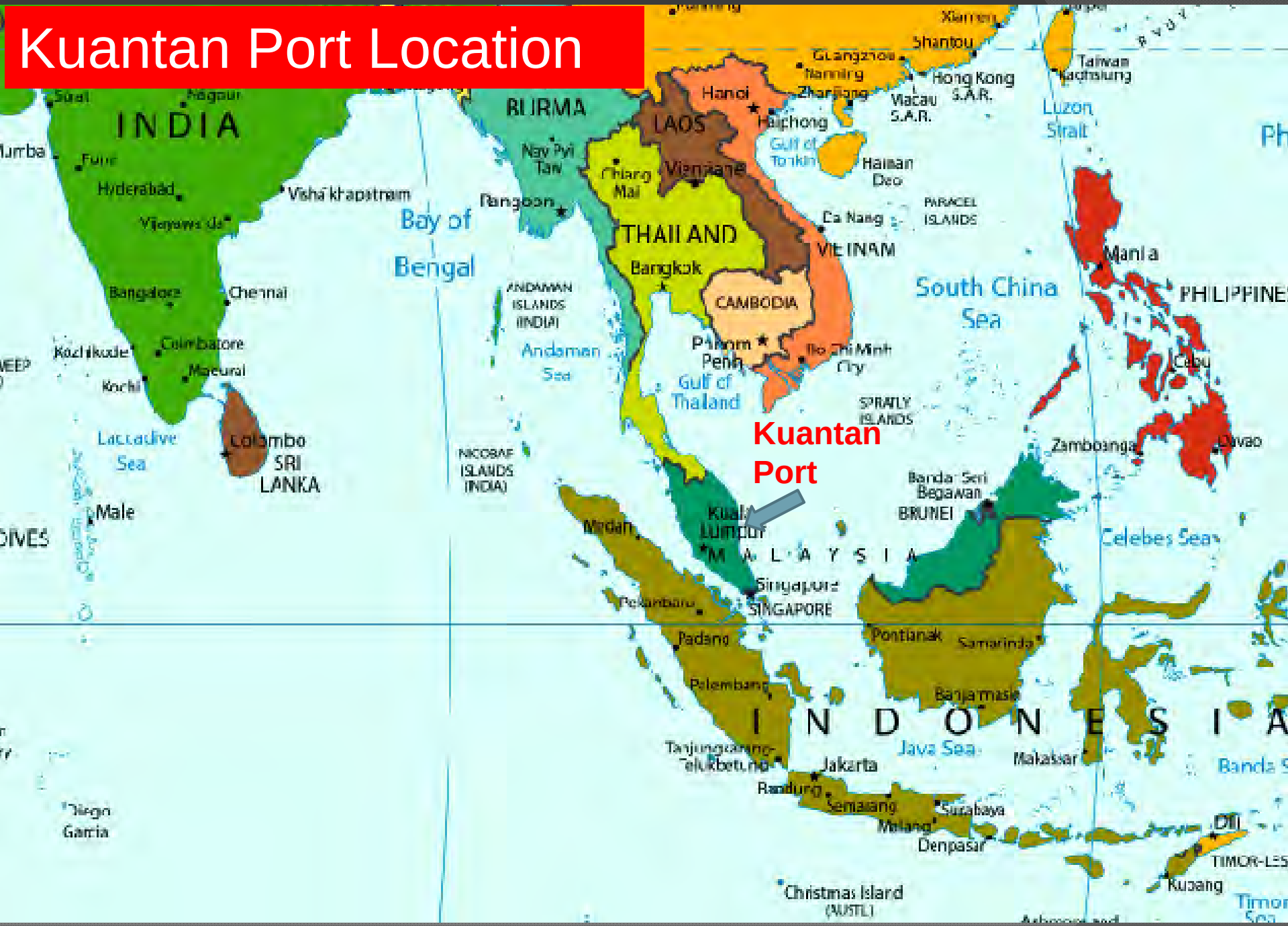
Kuantan Port Location



Kuantan Port's History

1st SEPTEMBER 1974

ESTABLISHMENT OF KUANTAN PORT AUTHORITY

1976

CONSTRUCTION COMMENCEMENT

1979

CONSTRUCTION COMPLETION

1980

COMMENCED PARTIAL OPERATIONS

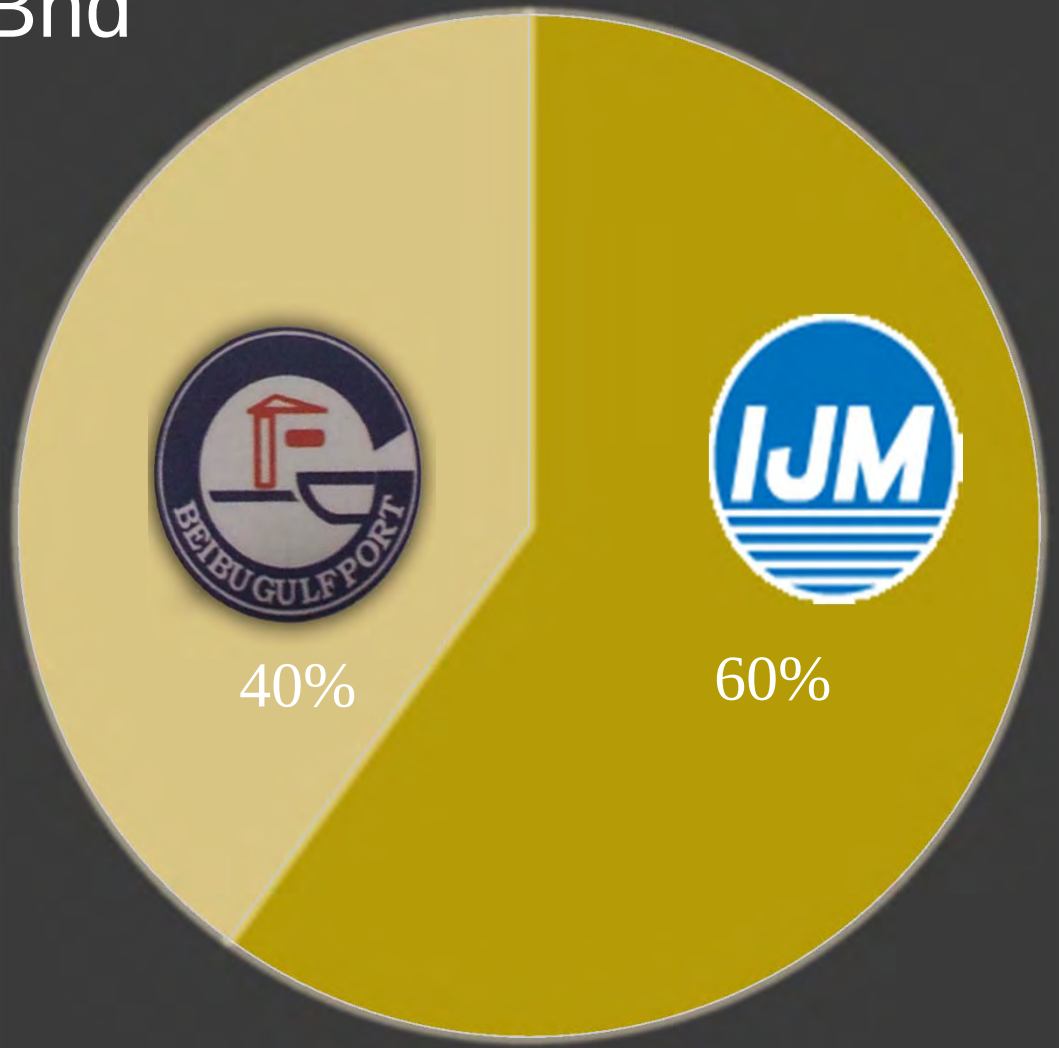
1st JANUARY 1984

COMMENCED FULL OPERATIONS

1st JANUARY 1998

PRIVATISATION TO KUANTAN PORT CONSORTIUM SDN BHD

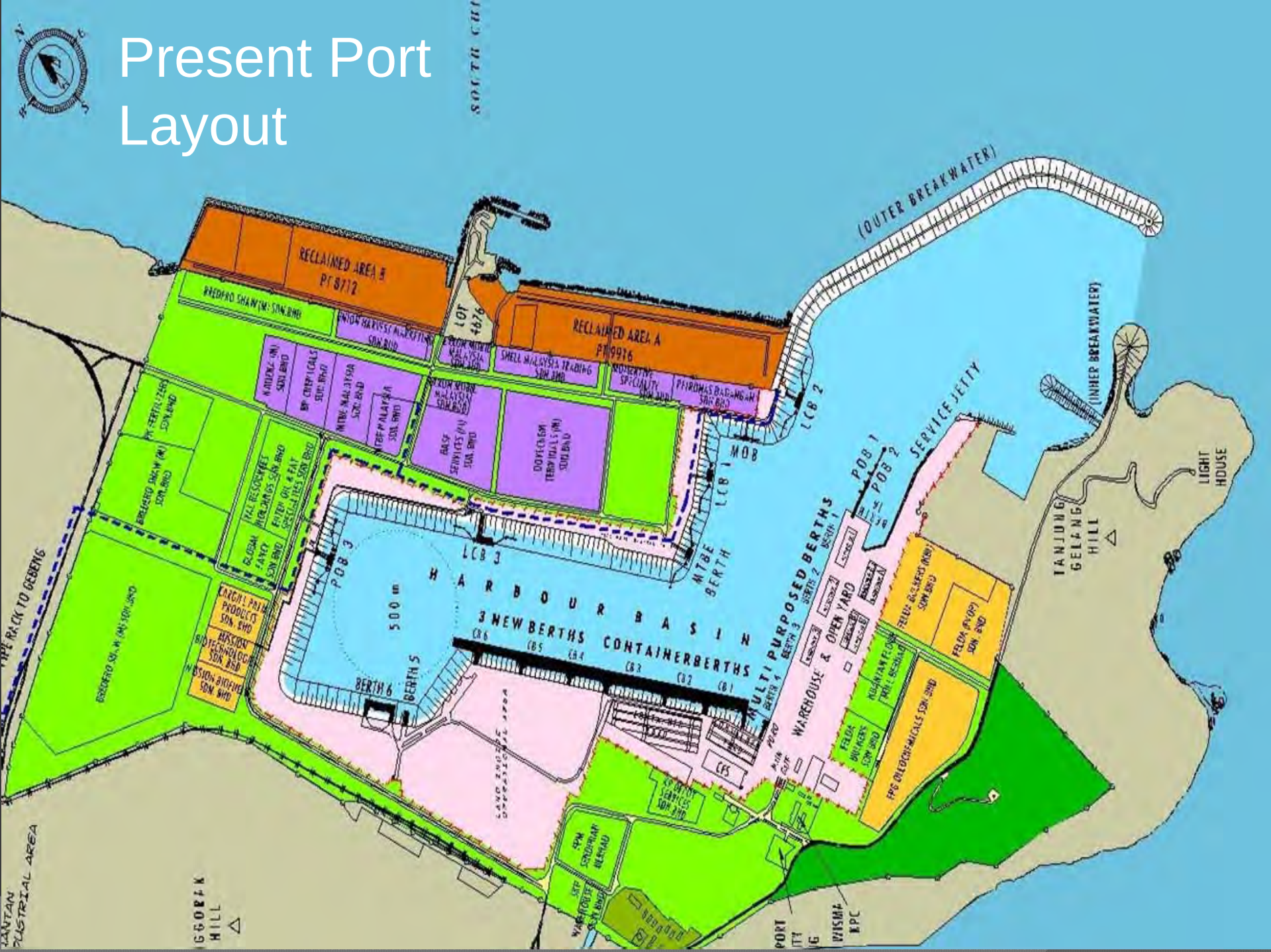
Shareholding of Kuantan Port Consortium Sdn Bhd



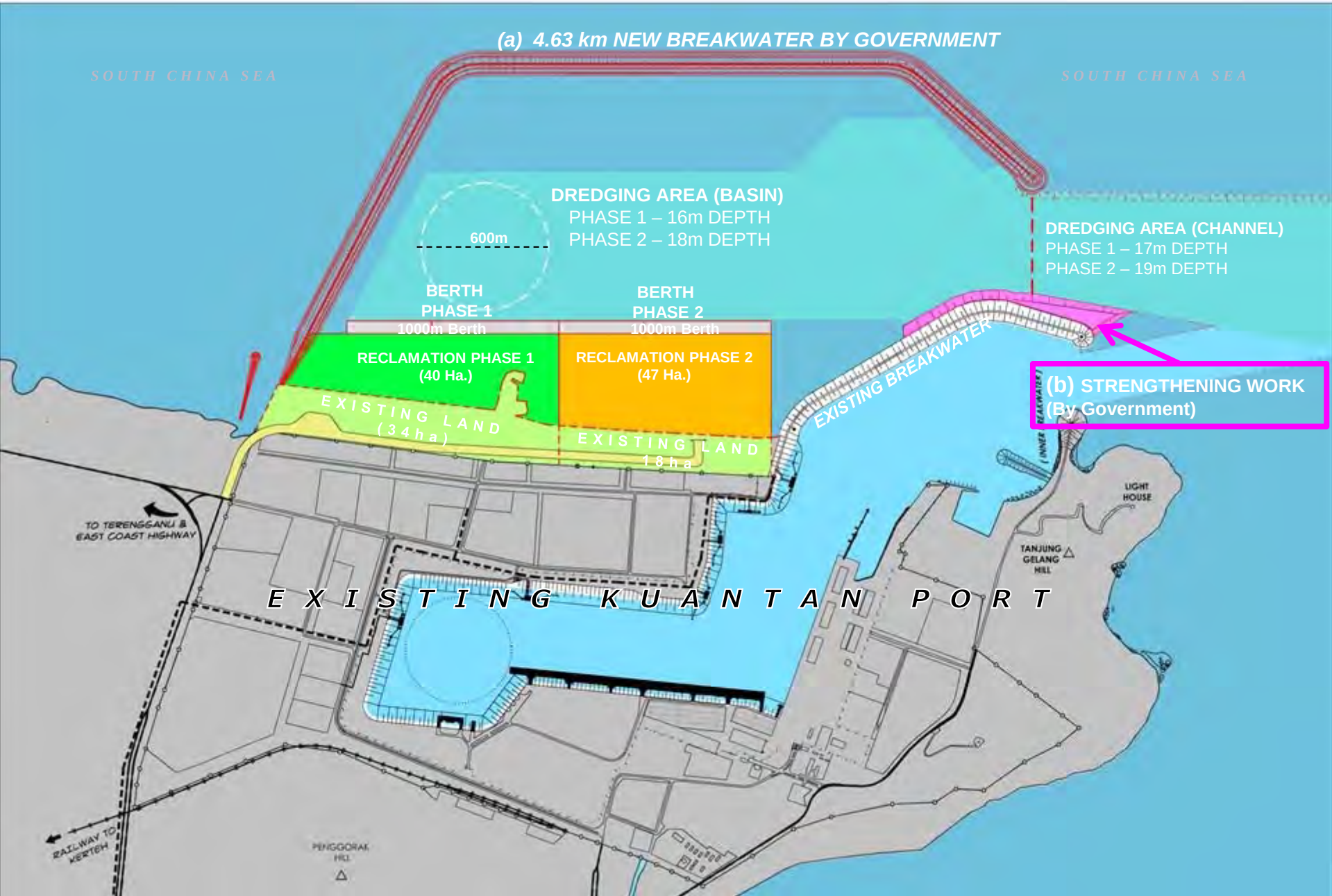
Berth Information

BERTH	NO. OF BERTH	BERTH LENGTH (Meter)	DRAUGHT (Meter)	VESSEL CAPACITY (Displacement Tonne)	BERTH CAPACITY (Million Tonne)
Palm Oil Berth No.1	1	240	11.2	53,000	1.0
Palm Oil Berth No.2	1	150	8.0	8,000	1.0
Palm Oil Berth No.3	1	240	11.2	53,000	1.0
Mineral Oil Berth	1	150	8.0	8,000	0.8
Liquid Chemical Berth	3	720	11.2	53,000	3.0
Container Berth	3	600	11.2	45,000	2.5
Multipurpose Berth	4	725	11.2	45,000	4.0
Berth No.5	1	18	6.0	16,000	1.0
Berth No.6	1	120	8.0	18,000	1.0
Service Jetty	1	140	4.0	5,000	0.8
Berth No.1A	1	70	8.0	8,000	0.9
M.T.B.E Berth	1	240	11.2	53,000	1.0
Cargo Berth 4	1	200	11.2	45,000	2.0
Cargo Berth 5	1	200	11.2	45,000	3.0
Cargo Berth 6	1	200	11.2	45,000	3.0
TOTAL	22	4,013	-	-	26

Present Port Layout

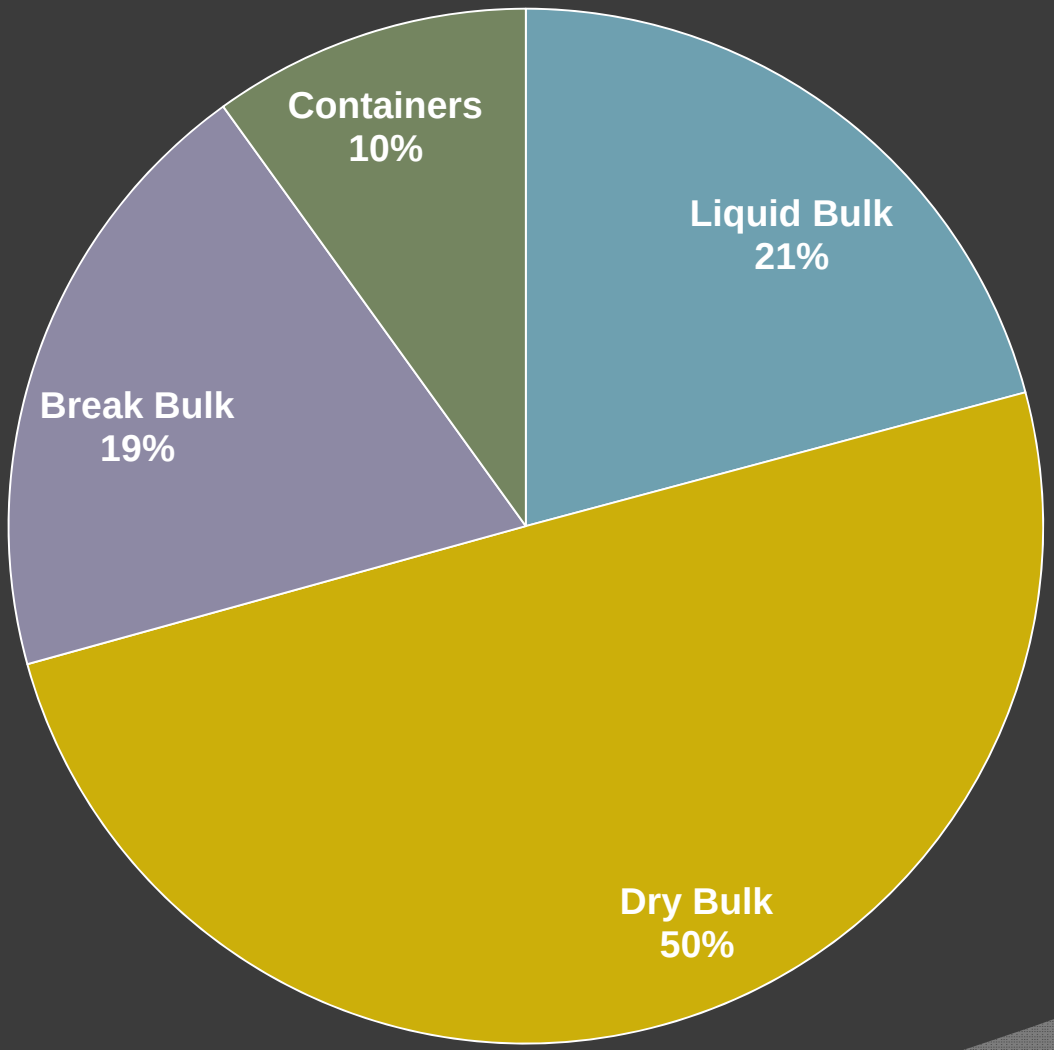


Port Expansion Plan - ongoing

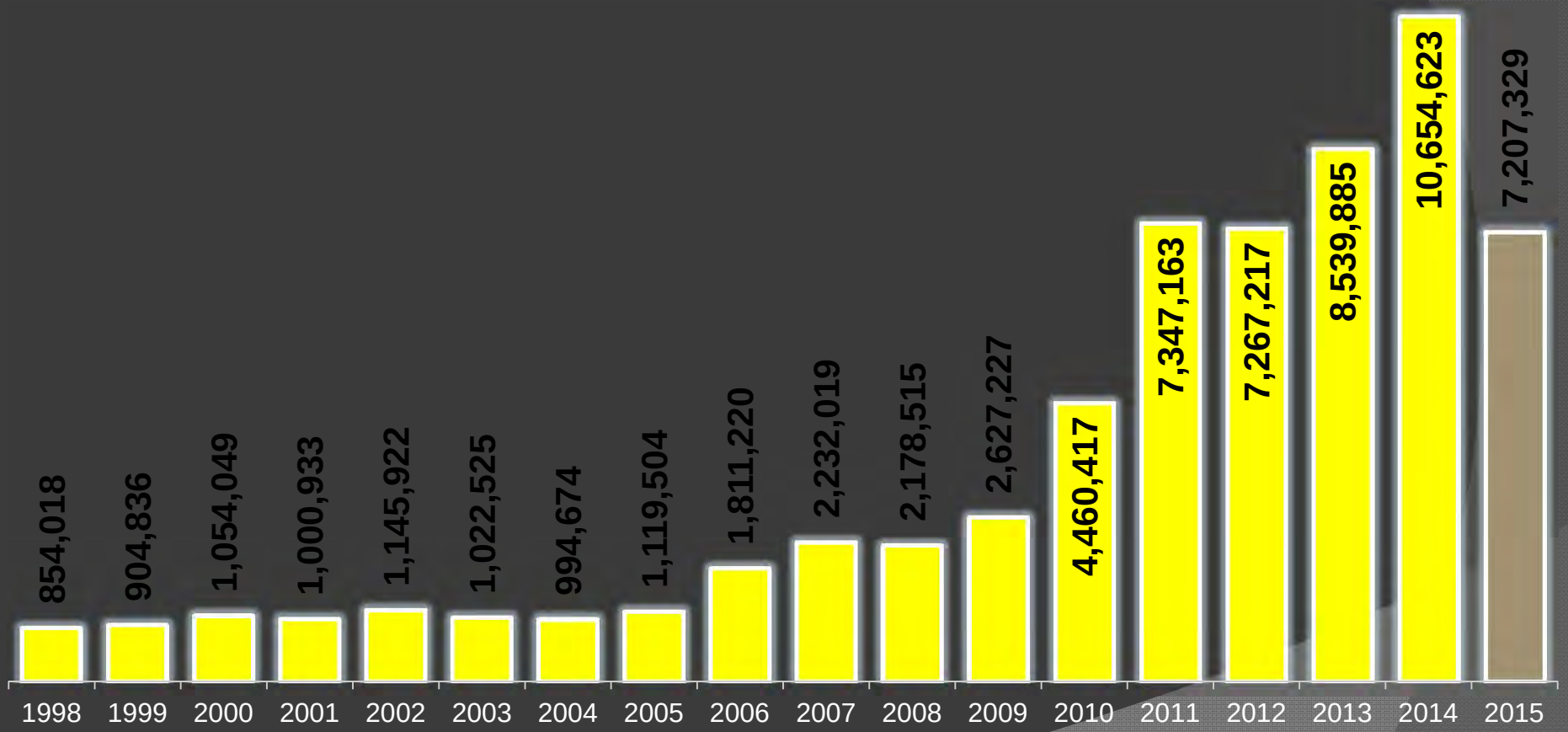


Cargo Throughput since Privatisation

Cargo Composition 2014



Dry Bulk Cargo Volume at Kuantan Port



Freightweight Tonnes (F.W.T)

Increase in Dry Bulk Cargo at Kuantan Port

- High demand from China for iron ore started in 2010 and the volume doubled to 4.5 million tonnes from previous year
- The volume kept on increasing until 2013 when the price dropped to USD 60 from USD 150 previously. Export of iron ore dwindled.
- In the same year bauxite ore volume picked up mainly due to restrictions on export in Indonesia.
- The volume jumped to 10 million tonnes in 2014 and expected to surpass 20 million tonnes in 2015.

Issues faced by Kuantan Port

- As the volume for dry bulk cargo was only about 1 million a year until 2005, providing ship loaders and un-loaders connected with a conveyor system deemed unviable
- The handling was done with portable conveyors which was cheapest mode of transferring cargo from the quay to the vessels.
- The rate of handling was about 6,000 tonnes per day (with 2 conveyors) and to handle 1 million tonnes per month, about 167 berth-days were required.


IMO 971
BULKER

Issues Faced by Kuantan Port

- When the volume jumped to 4 million tonnes, the number of berths has to multiplied by 4 which is not readily available.
- The berth waiting time of vessels at the anchorage increased from an average of 3 days to about 14 days incurring high demurrage charges.
- The port faced competition when the customers started moving to a neighbouring port.
- It boils down to either to increase the number of berths or to increase the rate of handling which shall reduce the berth days required in order to meet the demand.

Issues Faced by Kuantan Port

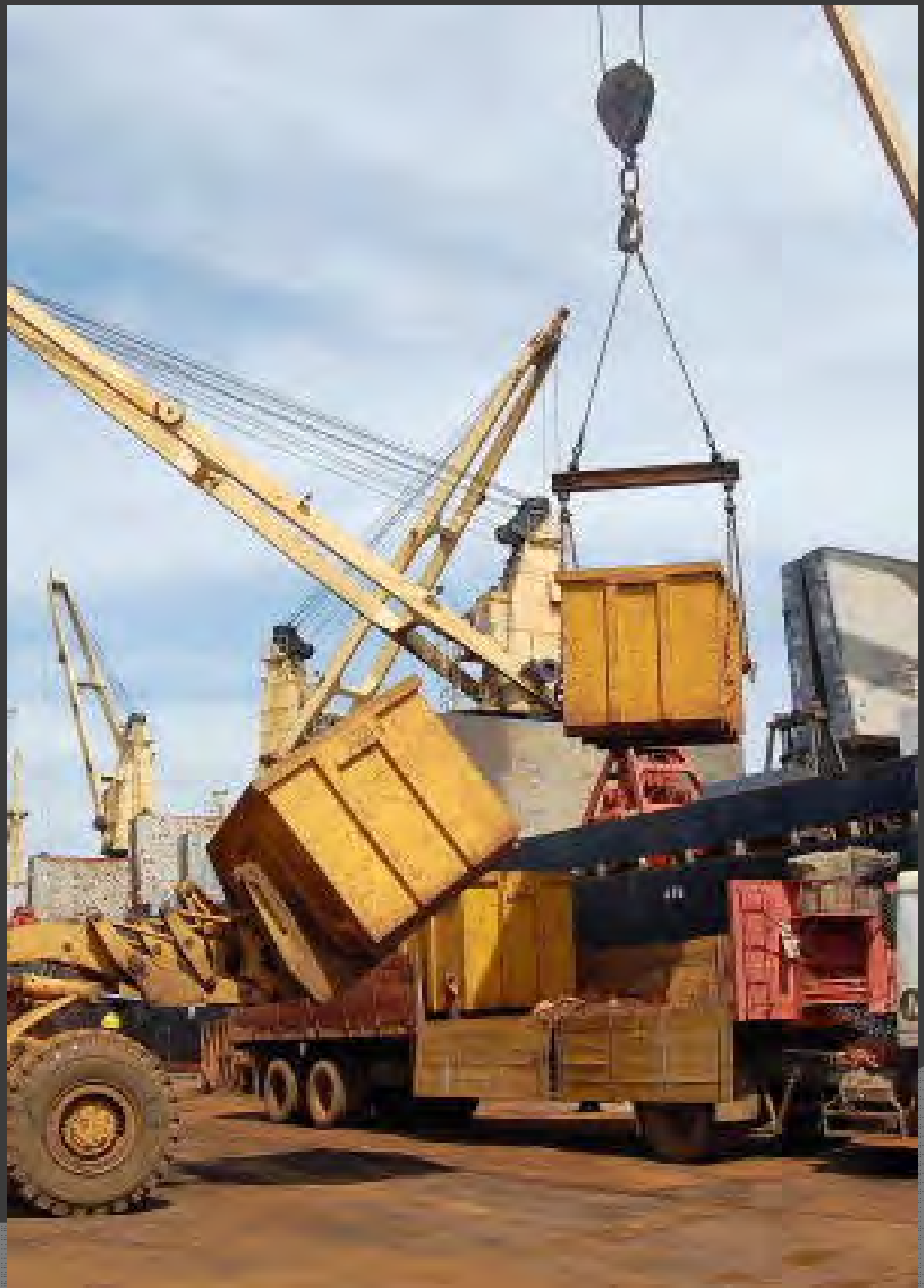
- Increasing number of berths would be time consuming and expensive option. It may take up to one year to construct a 200-metre berth and by the time the berth is completed, the demand may have died out.

- In short, the port faced a number of issues such as
  - How to divert from the dependency of portable conveyors
  - Finding a more efficient way of cargo handling
  - What are the alternative methods that can be implemented immediately
  - How to increase the volume passing through the port as the berth space is running out

Alternative Methods of Dry Bulk Cargo Handling

1) Loading by bins
   A. Positive Side
   - ✓ Easiest and fastest to implement – low investments Since all the loading vessels are geared, all hatches can be worked at the same time
   - ✓ The rate of handling can reach about 10,000 tonnes per day

   B. Negative Side
   - ✓ Extra manpower required for slinging
   - ✓ Only trailers can be used – more costly
   - ✓ Double handling – loading at yard



Alternative Methods of Dry Bulk Cargo Handling

2) Loading with Floating Cranes

A. Positive Side

- ✓ Fast loading – can achieve 20,000 tonnes per day
- ✓ Grab size can varied according to the density
- ✓ Can be outsourced to a experienced floating crane operator

B. Negative Side

- ✓ Loading point limited by the number of cranes
- ✓ Operator wants guarantee tonnage or minimum payment
- ✓ Needs to convince authorities to allow engaging foreign operators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Alternative Methods of Dry Bulk Cargo Handling

3) Loading with Barges

A. Positive Side

- ✓ Loading can be done at anchorage or at dolphin jetties
- ✓ Loading vessels not restricted by the port limitations – cape size
- ✓ Can free up berth space

B. Negative Side

- ✓ Loading at sea is slow due to sea conditions
- ✓ Very costly operations
- ✓ Double loading work
- ✓ Needs to convince authorities
- ✓ Gear-less vessels need floating crane – additional cost


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Other Issues that Cropped Up

1) Environmental pollution
2) Traffic congestion on the road
3) Insufficient storage area to feed the loading points
4) Government’s intervention and uncertainty

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