

APPENDICES

APPENDIX OF CHAPTER 2

2.1 STRAMINDO Data Sources

Table 2.1 Inventory of Data Used in STRAMINDO Demand Forecast

ITEM	SOURCE	DESCRIPTION
2002 Cargo OD at strategic ports	STRAMINDO Survey	Cargo OD database at strategic ports, includes information of the origin of unloaded cargo and destination of loaded cargo at 23 strategic ports. The scope of the database is 1 month record of activities at each port. Each record also includes information on type of cargo, carrier information, and packaging information.
2001 OD based on Voyage Reports	DGSC	Cargo and Passenger OD database based on a compilation of OD information from Voyage Reports.
2002 Port Loading/Unloading at Strategic ports	STRAMINDO Survey	Domestic and international loading and unloading at strategic ports by package type for year 2002
2001 Port Loading/Unloading	PELINDO/DGSC	Compilation of domestic loading and unloading at each commercial port – per commodity type and per package type
2001 Port Loading/Unloading	PELINDO/BPS	Total volume of loading and unloading at commercial and non-commercial ports
1989 to 2001 Seaborne Traffic	DGSC	Domestic and international seaborne traffic by package type
2001 P.T. Pelni Passenger OD	STRAMINDO Survey/PT Pelni	2001 passenger OD of P.T. researched as part of STRAMINDO survey. It covers one year information.
2002 P.T. Pelni OD sample data	DGSC/PT Pelni	Two weeks to one month data on OD of passengers per ship of P.T. Pelni
1989-2002 Domestic sea passenger traffic	DGSC	Volume of inter-island sea passenger traffic
1996 Ferry OD	DGLT	Ferry passenger OD
2000 Airline Passenger OD	BPS	Airline passenger OD
1993-2001 Airline passenger traffic	BPS	Volume of airline passengers
2003 Sea Passenger Profile	STRAMINDO Survey	Socio-economic profile, trips characteristics and assessment of level-of-service
Ship register	DGSC	Database of 4,000+ ships registered under DGSC, includes information key characteristics of each ship entry

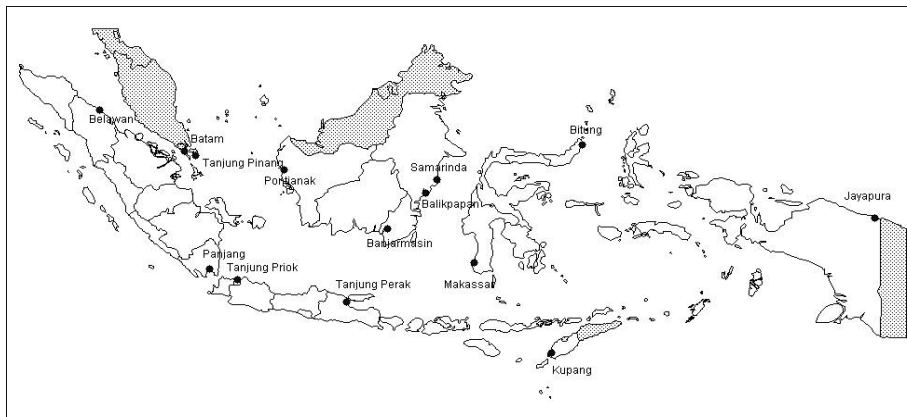
Table2.2 Summary of STRAMINDO Surveys

ITEM	OBJECTIVE	METHODOLOGY	SCALE (actual)
Cargo and Passenger OD	Traffic pattern	Review of manifests at each port	23 ports - one month data per port
Passenger Interview	Passenger profile	Questionnaire Interview of passengers	1,118 samples at 10 ports
Port Survey	Port profile and activity	Interview of port authorities and review of latest documents	23 strategic ports
Shipping Co. Interview	Profile of shipowners	Interview of shipowners	80 companies
Freight Forwarder Interview	Profile of freight forwarders	Interview of forwarders	37 companies
Shipper Interview	Profile of shippers	Interview of important shippers	4 organizations
Ship Inspection	Conditions of ships	On-board inspection	48 ships
Shipyards inspection	Condition of shipyards	On-site inspection	15 shipyards

APPENDIX OF CHAPTER 3

3.1 Port Reconnaissance Survey

Table 3.1 Location of 14 Surveyed Ports



(1) Pontianak

- This port is a typical river port. As of the survey period, the port was dredging the channel up to -5m in depth to provide a maximum available draft of 4.7 m to 5 m with tide through the channel.
- The main reasons for vessel waiting at anchorage included (1) shortage of berth, (2) low productivity of cargo operations and (3) poor sorting of discharged cargoes / poor cargo readiness for loading.
- Only three (3) berths are assigned for domestic trade. It was observed that vessels were berthed in twos or threes.

(2) Batam

- There are two (2) port authorities in the port of Batam. One belongs to the DGSC and is mainly in charge of port security. The other is OTORITA which is in charge of port management and operations. OTORITA collects port charges and implements investment in port supported by the central government.
- Batam Island is a bonded zone and imports are duty free. No stamp duties are required on the import of capital goods.
- All ports in Batam Island apply for compulsory pilot, servicing for 24 hours.
- Sekupang and Kasem Ports are successfully developed passenger terminals, but Batu Ampar has been delayed in developing a general cargo terminal.
- In Batu Ampar, general cargo and bulk ships wait for berth for one to three days.
- Therefore, cargo-handling operations on conventional vessels is not effective, even though it is made by tire-mounted shore cranes.

(3) Tanjung Pinang

- This port is located in Bintan Island, Riau. It has a channel in the west (16 miles) and in the east (11 miles), which are at least 183 m in width and -9 m in depth.
- It has three terminals – Sri Bintan Pura, Sri Payung Batu Anam, and Bayintan Kijang.

- Berths in Sri Payung Batu Anam (170 m in length) are congested by small domestic general cargo vessels due to low cargo-handling productivity, poor cargo readiness, and shortage of berths.
- (4) Belawan
- Channel: 14 km in length, 100 m in width and officially -8.7 m in depth, but actually, the channel can keep up to -8 m in depth by means of frequent dredging. Basin: 300-1,500 m in width and -6 to -10 m in depth. Max. size: LOA 200 m and draft 10 m.
 - There is much sedimentation in this channel. A ship that ran aground at No. 6 buoy interrupted the channel for 4 months. Since the channel is too shallow and narrow, more navigation aids are required.
- (5) Surabaya
- More than 80 vessels per day for more than 8 hours wait at anchorage. The reasons are mainly ship repairs/maintenance (40-50%), waiting for cargo (25%), non-availability of berth, and document preparation. Berthing occupancy ratio (BOR) was greater than 70% for the past 4 years.
 - The depth (-10 m) and width (150 m) of the approach channel are shallow and narrow. Therefore, vessels with greater than 8.5 m draft must wait for the tide at the outer anchorage.
 - The problem concerning shallow depth is also seen in the entrance of the dockyards of PT PAL and Dumas.
 - The collapse of the No. 6 & 7 quayside container cranes on February 22 disrupted the operations of the Terminal Petikemas Surabaya (TPS). Recovery will take more than 3 months.
 - Container stacking yard for domestic trade is shortened compared with international ones.
 - Spare parts and other equipment required by vessels, such as mooring rope, nautical instruments, and charts, are usually delivered from Singapore. It takes a long time for them to be delivered and they are very expensive. INSA strongly requires that ship supply markets become available in Surabaya so that vessels may get them easily, quickly, and cheaply.
 - Traditional ship activity in Kali Mas berths is very strong, while the demand for these vessels is strong in Surabaya.
 - The number of PSC officers is 10 (Deck, 5; Engineering,5).

Table 3.2 Surabaya Kali Mas Traditional Port



Table 3.3 Tanjung Perak Port



(6) Panjang

- This port is blessed with a natural configuration. Enough cargo handling equipment is installed including two (2) quayside container cranes.
- INSA insists that international shipping companies are taking away cargo from domestic shipping companies.
- PELINDO wants to clarify the rule regarding payment such as tonnage due (wharfage), pilotage, tugboat fee, anchorage fee, etc.

Table 3.4 Panjang Port



(7) Tanjung Priok

- This port consists of conventional and container terminals 1, 2 and 3 (TPK Koja); dry bulk, liquid bulk, passenger terminals, etc. It had a BOR of less than 70% in the past five (5) years.
- 70 to 80 vessels wait in anchorage every day due to non-availability of berths, waiting for cargo readiness, and for vessel repair and maintenance. The study of port congestion in this port is executed in the next item.

(8) Balikpapan

- There are 12 miles from anchorage to the conventional berths. The channel's depth and width are -12.1 m and 150 m, respectively.
- Four (4) to five (5) passenger boats (average 4 to 5 hours in berth) currently call everyday, and conventional vessels are forced to give up their berths in their favor.
- Containers are handled by a floating crane placed between container ships and the wharf. Unloaded containers are devanned in the yard and reloaded when empty. Therefore, cargo stacking yard is narrow.
- Pertamina berths for oil tankers are major berths in this port.

(9) Samarinda

- There are 37 miles from the estuary of the river to the conventional wharf which takes more than 4 hours to navigate. The channel's width and depth are -6 m and 80 m, respectively.
- Five (5) to 10 vessels usually wait for berth in the stream or outside anchorage.
- Berth length is 489 m including passenger boat terminal, and cargo vessels are always forced to give up their berths when passenger boats come.
- Access road gets jammed due to heavy traffic, especially when passenger boats come.

It is desirable to expand the access road.

- BOR might be about 90%. More berths should be prepared.
- The number of PSC officers is 5 (Deck, 2; Eng'g, 2; Radio, 1).

Table 3.5 Samarinda Port



(10) Banjarmasin

- There are 22 miles from the estuary of the river to the Trisakti and Martapura Baru terminals. Vessels with less than 5,000 DWT can call at the port. BOR is about 70%.
- The channel is very narrow and shallow (-4 m in depth), although the channel is dredged every three (3) months.
- Barges, loaded with coal of about 10,000 tons, come down through this channel with the tide. Some barges are bound for Ujung Pandang, and some load coal onto big bulkers (40,000 to 60,000 DWT) through floating or barge cranes at anchorage.
- The rate of cargo handling weight is 60% at anchorage and 40% in port.
- Navigation aids (buoys) in the channel were withdrawn, making this port unsafe.

(11) Jayapura

- This port is located at Yos Sudarso Bay facing the Pacific Ocean. The channel and port basin are quiet and deep. The working area, including the marshalling and cargo stacking yards, is surrounded by a hilly area which is steep and very narrow. It is not possible to expand the port area toward the hinterland.
- Once passenger boats come to berth, the access road becomes jammed so that vehicles have difficulty moving. The port strongly requires the resettlement of the passenger terminal to a suitable place.
- The expansion work on the container yard has commenced and will be completed within one year.

(12) Kupang

- This port is blessed with a natural configuration and provides a refuge between Timor and Semau Island. No dredging work on the channel is necessary. The maximum size of vessels that can be accommodated in this port is 12,000 DWT with a draft of 9 m.
- A multi-purpose terminal with a length of 239 m is under construction between the general cargo/container terminal and fish wharf with assistance from the Japan Bank for International Cooperation (JBIC) and will be completed within this year.
- This port handles mainly cargo unloading for general cargo vessels. Cargo loading of

livestock (cow) and fine rock is very minimal.

- The worst bottleneck in cargo operations is the lack of closed stockyard (transit shed or warehouse). There is an existing warehouse with an area of 1,000 m² (25 x 40 m). Cargo operations are sometimes suspended when the warehouse becomes filled with unloaded cargo.
- Only two (2) pilots and two (2) PSC officers are available.

Table 3.6 Tenau (Kupang) Port



(13) Makassar (Ujung Pandang)

- The port operates cargo handling equipment which consist of two (2) quayside container cranes, five (5) rubber-tired gantry (RTG) cranes, two (2) reach stackers, two (2) top loaders, one (1) container freight station (CFS) with a 4,000 m² area, and five (5) transit sheds with a 20,000 m² area. On the other hand, there are separate cement and grain (wheat) silos.
- There is Paotere Wharf (510 m) for traditional ships located 2 km north from the conventional port.
- The BOR was 64% in 2002.
- Eight (8) PSC officers are available (Deck, 5; Eng'g,2; Radio, 1).
- An average of 10 vessels wait everyday due to non-availability of berth space and for cargo loading/unloading.

Table 3.7 Makassar Port



(14) Bitung

- This port, 43 km east-southeast from Manado, is blessed with a natural configuration being surrounded by Sulawesi and Lembeh Island.
- Ninety percent (90%) of calling vessels are involved in domestic trade; the rest are in

international trade.

- There is a passenger terminal for conventional vessels which are always obliged to leave their berths when passenger ships come. It also has a separate ferry terminal for small inter-island vessels.
- Traditional ships also carry passengers, but nowadays their passengers are taken by ferry and passenger boats.
- The number of pilots is three (3) and their skills are not good. INSA strongly requires the improvement of their skills and the increase in their number (+1). (PELINDO agreed on this in its meeting with the Study Team).
- A new container terminal (130 m in length and –10 m in depth) without a quayside container crane is under construction with funds from the JBIC and will be completed within this year.

3.2 Summary of Indonesian 25 Strategic Ports Information

Table 3.8 Summary of Indonesian 25 Strategic Ports Information (1/7)

No.	Name of Port	P-1 Batam	P-2 Lhokseumawe	P-3 Belawan	P-4 Tanjung Pinang
1	Position (Type of port)	1°-07' North 103°-07' East Channel Port	5°-15' North 97°-30' East Sea Port	3°-47' North 98°-42' East Belawan River Port	0°-52' North 104°-37' East Sea Port
2	Management Operation	Port Authority OTORITA	ADPEL PELINDO I	ADPEL PELINDO I	ADPEL PELINDO I
3	Channel	No special channel			
	1) Length		600m	7.5 miles (14km)	16 miles (West), 11' (East)
	2) Width		200m	75m	183m, 100m
	3) Depth		-10m	-8.5m (-8.0m Acutal)	-9m, -5m
	4) Tide		HHWS 3.3, LLWS 1.8m	HHWS 3.3, LLWS 1.8m	HHWS 2.1m
4	Bert Length (Depth)	Multi-purpose: 1,250m (-10.5m) CPO Tanker: 420m (-13m) Passenger: 177m (-9m)	Conventional : 567m (-9.5m) Dry Bulk : 195m (-4.5m) Passenger : 288m	Cont Terminal: 850m (-8m) Convent: 1,880m (-7m) Dry bulk: 150m (-7m) Liquid bulk: 200m (-7m) Others: 1,800m: (-9m)	Conventional: 440m (120 + 150 + 170) m
5	Facility				
	1) Closed Storage	31,616 m2	4,000 m2	90,000 m2	2,000 m2
	2) Open Storage	382,515 m2	22,158 m2	220,000 m2	3,000 m2
	3) Others				
6	Equipment	Shore Crane various kinds	Mobile Crane: 1	Cont. Crane 3 RTGs 4 Mobile Crane 4	Mobile Crane 2,
7	Ship calls	Total 109,654(2002)	Total 531(2002)	Total 11,616 (2002)	Total 31,038 (2002)
	1) Domestic	65,672		4,872	19,932
	2) International	43,982		6,744	11,106
8	Cargo throughput	Total 4,178,707 tons (2002)	Total 4,979,594 tons (2002)	Total 12,608,867 tons (2002)	Total 6,010,732 tons (2002)
	(In which containers)	(Total 146,744 TEUs)		(Total 406,824 TEUs)	
	1) Domestic	2,114,262 tons		6,920,816 tons	3,466,539 tons
	(In which containers)	(22,666 TEUs)		(Convent 169,341 TEUs)	
	2) International	2,064,445 tons		5,688,051 tons	2,544,193 tons
	(In which containers)	(124,078 TEUs)		(International 237,483 TEUs)	
9	Kind of Cargo				
	1) Load	Container, GC	CPO, Agricultural Products	Container, GC, CPO, Rattan,Plywood, Coconut oil, Rubber	GC, Furniture, Rubber, Textile
	2) Unload	Container, GC	GC,	Container, GC	GC
10	Cargo Handling Productivity (T/G/H)				
	1) General cargo			21.00	24.00
	2) Bagged cargo			19.00	28.00
	3) Liquid bulk cargo		70.10	41.48	38.00
	4) Dry bulk cargo		145.60	36.70	-
	5) Container Ship's Gear (TEU/G/H)				
	6) Container Crane (TEU/G/H)				
11	Ship Service Performance				
	1) Waiting Time (H)		2.77	1.78	-
	2) Approach Time (H)		1.09	1.94	4.80
	3) Effective Time (H) *		23.78	24.77	16.24
	4) Berthing Time (H)		57.54	63.64	90.84
12	Port Facility Utilization (%)				
	1) Berth Occupancy Ratio		29.68	60.52	70.00
	2) Shed Occupancy Ratio		1.21	1.92	65.00
	3) Yard Occupancy Ratio		1.21	1.92	50.00
13	Max. Size of vessel	Pax. 10,000 GRT Bulk 35,000 DWT Tanker 35,000DWT	20,000 DWT LOA 170m draft 9.5m	1,152 TEU Ship calls weekly. Max.45,000DWT(245m D 7m) LOA 200m, Max. Draft 10m called	Conventional: 1,200 DWT
14	Present Issues			12km access channel is maintained to be 100m minimum width and -9.5m in depth (dredging volume: 1,800,000m3/year)	Berths in Sri Payung Batu are congested by small domestic vessels due to low cargo handling productivity, bad cargo readiness and shortage of berths.
15	Future Plan	BIDA (Batam Intudrial Development Authority) has five (5) development plans including 150,000 DWT tanker berth.	There is Master Plan of port facilities development and the implementartion schedule until 2018.	There is Master Plan of port facilities development and the implementartion schedule until 2018.	

Source: DGSC, Pelindo I, II, III, IV
Remark: Effective Time means cargo operation time

Summary of Indonesian 25 Strategic Ports Information (2/7)

No.	Name of Port	P-5 Dumai	P-6 Pekanbaru	P-7 Teluk Bayur	P-8 Palembang
1	Position (Type of port)	1°-41' North 101°-27' East River Port	0°-30' North 101°-27' East Siak River Port	1°-00' South 100°-21' East Sea Port	2°-58' South 104°-46' East Musi River Port
2	Management Operation	ADPEL PELINDO I	ADPEL PELINDO I	ADPEL PELINDO II	ADPEL PELINDO II
3	Channel				
	1) Length	61.51 miles	80 miles	1.8km	55 miles
	2) Width	225m	60-100m	150m	120m
	3) Depth	-6m	-5m	-9 to -12m	-8m
	4) Tide			MHWS 1.94m, MLWS 0.1m	
4	Bert Length (Depth)	Conventional: 893m (-8m) Passenger: 36m (-3.5m)	Conventional: 210m (-5m)	Cont. Terminal : 150m (-9.5m) Conventional: 953m (-9.5m) Dry Bulk : 248m (-9.5m) Small ship : 335m (-2m)	Cont Terminal: 265m (-9.2m) Conventional: 475mm (-7m) Small vessel: 280m (-3.5m)
5	Facility				
	1) Closed Storage	21,230 m2	1,920 m2	18,401 m2	9,042 m2
	2) Open Storage	11,575 m2	5,215 m2	160,469 m2	59,646 m2
	3) Others			18,400m2 (CFS)	
6	Equipment	Mobile Crane 2	Mobile Crane 1	Mobile Crane 1 Top Loader 1	Cont. Crane 1 Mobile Crane 2
7	Ship calls	Total 6,420 (2002)	Total 18,273 (2002)	Total 1,732 (2002)	Total 3,651 (2002)
	1) Domestic	3,660	15,028	1,387	3,004
	2) International	2,760	3,245	345	647
8	Cargo throughput	Total 34,912,885 tons (2002)	Total 6,587,049 tons (2002)	Total 8,130,049 tons (2002)	Total 10,656,527 tons (2002)
	(In which containers)	(Total 297 TEUs)	(Total 111,092 TEUs)	(Total 25,192 TEUs)	(Total 46,764 TEUs)
	1) Domestic	16,475,817 tons	4,399,724 tons	2,913,129 tons	1,621,533 tons
	(In which containers)	(113 TEUs)	(9,371 TEUs)	(22,860 TEUs)	(8,340 TEUs)
	2) International	18,437,068 tons	2,187,325 tons	5,216,920 tons	9,034,994 tons
	(In which containers)	(184 TEUs)	(101,721 TEUs)	(2,332 TEUs)	(38,424 TEUs)
9	Kind of Cargo				
	1) Load	GC, Oil, CPO, PKE, Fertilizer, Rice, Plywood	Container, GC	Container, GC, Fuel Oil, Cement, Coal, CPO, Rubber	Container, GC, Fuel Oil, Fertilizer, Coal
	2) Unload	GC, Oil, CPO	Container, GC	Container, GC, Fuel Oil	Container, GC, Non-Fuel Oil, Cement, Fuel Oil, Wheat
10	Cargo Handling Productivity (T/G/H)				
	1) General cargo	20.00	11.00	30.00	35.00
	2) Bagged cargo	38.00	17.00	49.00	32.00
	3) Liquid bulk cargo	85.00	-	201.00	177.00
	4) Dry bulk cargo	29.00	102.70	123.00	67.00
	5) Container Ship's Gear (TEU/G/H)				
	6) Container Crane (TEU/G/H)				
11	Ship Service Performance				
	1) Waiting Time (H)	4.15	1.00	5.80	5.50
	2) Approach Time (H)	8.32	13.00	3.00	12.00
	3) Effective Time (H) *	24.31	33.82	44.50	20.50
	4) Berthing Time (H)	41.71	73.00	72.70	42.00
12	Port Facility Utilization (%)				
	1) Berth Occupancy Ratio	78.80	53.88	64.00	68.00
	2) Shed Occupancy Ratio	46.30	0.61	25.00	41.00
	3) Yard Occupancy Ratio	37.34	0.35	3.38	-
13	Max. Size of vessel		1,000 DWT		
14	Present Issues		Due to new bridge const-ruction 150m downstream of the port, new location Perawang area will be developed for large vessel.		The outer channel is maintained with dredging twice a year, vessel often waits for high tide.
15	Future Plan				

Source: DGSC, Pelindo I, II, III, IV
Remark: Effective Time means cargo operation time

Summary of Indonesian 25 Strategic Ports Information (3/7)

No.	Name of Port	P-9	P-10	P-11	P-12
Item	Panjang	Tanjung Priok	Bojonegara (Cigading/Banten)	Pontianak	
1	Position (Type of port)	5°-28' South 105°-19' East Sea Port	6°-06' South 106°-53' East Sea Port	5°-54' South 106°-05' East Sea Port	0°-02' North 109°-16' /23' East Kapuas River Port
2	Management Operation	ADPEL PELINDO II	ADPEL PELINDO II	ADPEL PELINDO II	ADPEL PELINDO II
3	Channel	No special channel		No special channel	
	1) Length		4.5 miles (8,000m)		17 miles
	2) Width		Min. 95m (Ent. of BW)		70m
	3) Depth		Min. -11.7m (Channel -14m)		-5 to 5.5m
	4) Tide		MHWS 86, MLWS 26cm		
4	Bert Length (Depth)	Cont. Terminal: 400m (-12m) Convent. : 1,016m (-10m) Grain : 300m (-15m)	Convent: 7,7,37m(-5 to -12m) CT JICT: 1,637m (-14m) CT Koja : 650m (-14m)	475.5m -7 to -10m	Semi-cont: 100m (-5.5m) Conventional: 607m (-5.5m) Liquid Bulk: 140m (-5.5m)
5	Facility				
	1) Closed Storage	13,262 m2	187,000 m2	1,500 m2 (CFS)	8,090 m2
	2) Open Storage	24,739 m2	480,000 m2	22,437 m2	38,200 m2
	3) Others	7,200 m2 (CFS)	9,300 m2 (CFS)		
		C. Yard 75,000 m2			
6	Equipment	Cont. crane : 2 RTG : 4 Mobile Crane : 5	Cont Crane 17 RTG 57 Mobile Crane: 2	Multipurpose Gantry Crane: 3 RTG :1	Quayside Cont. Crane 1 Mobile Crane 2 Side Loader, Top Lifter, Super Stacker 1 each
7	Ship calls	Total 2,510 (2002)	Total 16,322 (2002)	Total 4,406 (2002)	Total 4,054 (2002)
	1) Domestic	1,829	11,435	2,745	3,257
	2) International	681	4,887	1,661	797
8	Cargo throughput	Total 11,394,974 tons (2002)	Total 54,762,826 tons (Dec 02)	Total 27,038,455 tons (2002)	Total 4,074,647 tons (2002)
	(In which containers)	(Total 75,964 TEUs)	(Convent 540,384 TEUs)	(Total 32,508 TEUs)	(Total 112,240 TEUs)
	1) Domestic	7,905,529 tons	35,412,164 tons	15,186,405 tons	2,979,123 tons
	(In which containers)	(75,964 TEUs)		(17,335 TEUs)	(82,393 TEUs)
	2) International	3,489,445 tons	19,350,662 tons	11,852,050 tons	1,095,524 tons
	(In which containers)			(15,173 TEUs)	(29,847 TEUs)
9	Kind of Cargo				
	1) Load	Container, GC, Cement, CPO, Coal , Corn Rice, Wheat,	Container, GC, Grain, Cement, Petroleum, CPO	Container, GC, Coal, Cement, Corn, Rice, Steel Coil,	Plywood, Rubber, GC, Agricultural products
	2) Unload	Copra, Cacao, Rattan		Soybean & Logs	Rice, Refine Sugar, Fertilizer, GC
10	Cargo Handling Productivity (T/G/H)				
	1) General cargo	25.00	35.00	18.00	19.00
	2) Bagged cargo	28.00	35.00	49.00	32.00
	3) Liquid bulk cargo	109.00	179.30	240.00	-
	4) Dry bulk cargo	37.00	146.90	-	-
	5) Container Ship's Gear (TEU/G/H)				
	6) Container Crane (TEU/G/H)				
11	Ship Service Performance				
	1) Waiting Time (H)	0.70	5.81	1.20	1.30
	2) Approach Time (H)	2.60	3.40	2.00	3.00
	3) Effective Time (H) *	31.50	46.34	39.00	46.00
	4) Berthing Time (H)	56.60	70.56	72.00	62.00
12	Port Facility Utilization (%)				
	1) Berth Ocupancy Ratio	30.00	68.00	-	72.00
	2) Shed Occupancy Ratio	38.00	40.00	-	39.00
	3) Yard Occupancy Ratio	5.53	45.42	-	37.00
13	Max. Size of vessel	40,000 DWT Max. Draft 10.5m			Max. draft is 4.7 to 5m with tide. Containership (DWT 5,000, 260 TEU) is calling.
14	Present Issues				12 km length of channel needs dredging to maintain depth. Number of berths for domestic vessels is shorted.
15	Future Plan			Bojonegara Port is planned as a supporting port of Tj. Priok	The new port facilities will be developed in western area from present position that means to reach to the river estuary.

Source: DGSC, Pelindo I, II, III, IV

Remark: Effective Time means cargo operation time