

Report on
Coastal Trade in the Red Sea during the Years 1989 and 1990

Saudi Seaports Authority
Central Innovation Department

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1 EXECUTIVE SUMMARY:

1. Feeder services introduced at marginal cost by international main liner companies and local sambouk trade at low handling costs stand in direct competition to national coastal trade.
2. Concentration of regular shipping through development of Jeddah Islamic Port and other major ports eliminated almost all traditional traffic routes along and across the Red Sea coasts.
3. Road transport as 'door-to-door' service on asphalted coastal roads connecting all minor ports diverted coastal shipping by competing favourably on relatively low operating costs, better services and appropriate loads.
4. Distribution of refined liquid products, mainly fuel oils, from KFIP Yanbu to bulk depots, military ports and desalination plants represent 90 percent of present total coastal transport.
5. Crude oil shipment from Ras Tanura to Red Sea refineries via foreign waters by definition represents no coastal transport.
6. National transshipment of consumer goods through Jeddah Port increased from 3,000 to 26,000 tonnes between 1989 and 1990. However, its share in total coastal trade is still negligible.
7. Solid bulk cargo is transported sporadically and on a tramp basis, where coastal projects demand high cargo quantities.
8. Small quantities of agricultural produce and livestock are transported along the Asir coast by sambouks. Despite some agricultural potential, no other ports trade products by sea.
9. Fish is landed in most minor ports in various quantities. No sea produce is traded among Red Sea coastal villages. Its potential is utilized to just 10 percent of national demand.
10. Most minor port extensions were intended to accommodate imports of construction materials during the boom period and should be rededicated for the basic needs of coastal traders.
11. Demand at minor ports for consumer and construction goods is largely too low to provide for inducement cargo to main line vessels for including additional stopovers on their schedules.
12. Establishment of development centres, along with general high population growth, will provide a long-term potential.
13. Financial, administrative and legal incentives should be offered to reputable private national shipping companies.
14. Customs procedures should be simplified to utilize coastal trade for competitive transit through the Red Sea major ports across the Kingdom and into neighbouring countries.

2 FEEDER SERVICES VERSUS COASTAL TRADE IN THE MIDDLE EAST:

Feeder services might be given by international lines, either through main liner shipping companies calling en route or through relay services as dedicated or common-user feeders operating from load centres (mother ports).

Regional lines also contribute services through commercial feeders as common users or through coastal vessel operators, who employ their vessels however only on tramp basis, subject to inducement. The latter two usually load feeder cargo as an additional supplement to their original freight.

Such feeder services consequently represent the determinants of coastal trade, pose a certain degree of competition, and sometimes replace traditional and recent coastal trade connections.

In contrast, coastal trade is defined as shipping transport by national carriers in national waters. Carriers can be all vessels disregarding capacity and specialization.

Local coastal trade has gradually been replaced by regular shipping on larger vessels. The number of vessels registered under Saudi Arabia flag declined steadily by about 50 percent over the last ten years. Besides the general effects of the world recession, this decline is attributed to the phasing-out of bunker subsidies and stricter rules for the registration of vessels under Saudi flag. Saudia's fleet of coastal vessels is overaged with an average age of above 20 years. A great number of vessels was sold for scrapping during the last years due to lack of business opportunities and government incentives. More than 70 percent of the existing coastal vessels are unemployed.

There are 13 shipping companies in Saudi Arabia, which own vessels suitable for liner services, of which 7 are registered as coastal shipping companies. Still, none of these operate a regular coastal shipping service. However, this replacement took a different pace in the Arabian Gulf than in the Red Sea.

2.1 *Arabian Gulf:*

The Arabian Gulf is lined with a multitude of well-equipped major ports, connected by tight shipping schedules. Here local trade could function as a supplement to regular shipping lines to guarantee a constant flow of cargo. Only Saudi Arabia and Qatar have a priority policy in support of the national shipping industry. Coastal trade connects ports which are not, or irregularly, served only occasionally on tramp basis.

Sambouk transport can usually still be found in the sheltered Arabian Gulf, connecting for instance the Iranian fishing villages, which are either cut off from their hinterland by rugged terrain, or connected to an inland road through difficult dirt roads. Much smuggling is also conducted between the emirates and the Iranian coast. Sambouks are also useful in connecting the peninsulas and islands of the lower gulf, such as Bahrain, Qatar and the Emirate east coast.

2.2 Arabian Sea and Gulf of Aden:

Out in the Arabian Sea, coastal trade is done by regular medium-sized tramp and commercial vessels along the cut-off Omani ports. These ports are not connected by a road on the southeast coast, however, they are neither served by feeder vessels. The coastal trade crosses into Yemen connecting to Mukalla, from where a coastal road leads to Aden. Much smuggling can also be expected along this coast.

2.3 Red Sea:

In the Red Sea, major ports are less in number and concentrated at the inlets of this sea basin. In the centre of the Red Sea, it is only Port Sudan and Jeddah Islamic Port, which provide harbouring facilities to larger vessels.

Jeddah, as the Kingdom's largest and traditional gateway, attracted all the shipping traffic away from its minor ports.

Additionally, Saudi Arabia's coastal plains provide ample space for coastal roads, however small, which carry cargo faster and, due to low petrol prices, also more cost-efficient.

Finally, low population densities prevail in the northwest of the Kingdom, thus inhibiting any development of dense trade.

Despite a coastal road, Egypt's minor Red Sea ports are connected through coastal trade to Port Suez, which provides commodities for its more populated coastal plains.

Shipping connections, such as the ferry service between Port Sudan and Jeddah Islamic Port, or erratic tramp shipping between the minor ports of Egypt and those of Saudi Arabia, are by definition no coastal trade.

The densely populated coastal areas of the Asir and North Yemen are connected among each other and with their numerous outlying islands by sambouks. However, port extensions such as in Gizan, Farasan, Hodeidah and Mocha, opened the trade to regular commercial vessels. Also, due to a regular ferry service between Gizan port and Farasan Island, there exists hardly any necessity for regular or extensive trading into this region.

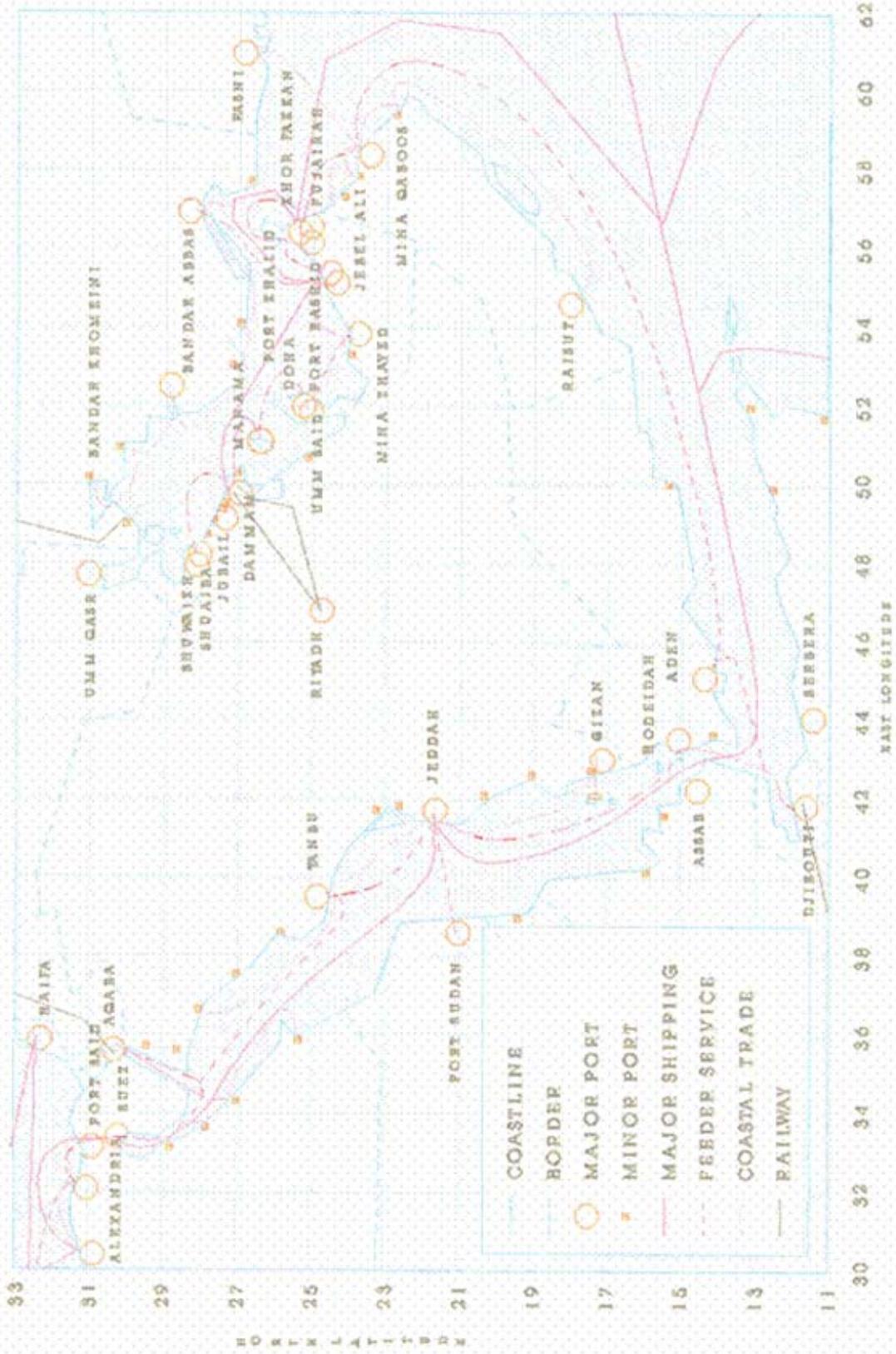
SHIPPING TRADE IN THE RED SEA

BETWEEN SAUDI ARABIAN AND MAJOR PORTS (1989)						
	YANBU PORTS		JEDDAH ISLAMIC PORT		GIZAN PORT	
	IMPORT	EXPORT	IMPORT	EXPORT	IMPORT	EXPORT
AQABA	0	0	2,188	60,659	0	0
PORT SUEZ	1,238	484,600	144,134	34,813	0	0
PORT SUDAN	0	498,622	241,288	133,972	0	0
HODEIDAH	0	343,063	172	32,607	250	3,000
ASSAB	0	67,678	10,155	3,669	0	0
DJIBOUTI	0	167,197	12,003	9,178	0	0
ADEN	0	79,210	125	6,856	635	0
BERBERA	0	0	33,092	29,197	1,128	589
DHUBA	0	6,255,966	0	508	0	0
YANBU	0	0	1,500,000	2,024	0	0
JEDDAH	2,024	1,500,000	0	0	0	0
MINOR PORTS	0	605,568	288	2,000	0	1,200
TOTAL	3,262	10,001,904	1,943,445	315,483	2,013	4,789

BETWEEN SAUDI ARABIAN AND MAJOR PORTS (1990 ESTIMATES)						
	YANBU PORTS		JEDDAH ISLAMIC PORT		GIZAN PORT	
	IMPORT	EXPORT	IMPORT	EXPORT	IMPORT	EXPORT
AQABA	0	15,000	5,300	13,000	0	0
PORT SUEZ	2,000	532,300	11,600	4,000	275	0
PORT SUDAN	0	555,500	47,400	388,000	0	0
HODEIDAH	0	174,500	400	56,000	600	3,000
ASSAB	0	62,500	10,000	13,800	0	0
DJIBOUTI	0	231,000	2,400	9,000	0	0
ADEN	0	100,000	200	13,000	180	11,050
BERBERA	0	30,000	32,600	13,700	0	0
DHUBA	0	6,366,795	300	9,000	0	0
YANBU	0	0	2,211,354	27,000	0	0
JEDDAH	27,000	2,211,354	0	0	0	0
MINOR PORTS	0	0	7,000	10,000	47,800	1,800
TOTAL	29,000	10,278,949	2,328,554	556,500	48,855	15,850

BETWEEN SAUDI ARABIAN AND MAJOR PORTS (DIFFERENCE 1989 TO 1990)						
	YANBU PORTS		JEDDAH ISLAMIC PORT		GIZAN PORT	
	IMPORT	EXPORT	IMPORT	EXPORT	IMPORT	EXPORT
AQABA	0	15,000	3,112	(47,659)	0	0
PORT SUEZ	762	47,700	(132,534)	(30,813)	275	0
PORT SUDAN	0	56,878	(193,888)	254,028	0	0
HODEIDAH	0	(168,563)	228	23,393	350	0
ASSAB	0	(5,178)	(155)	10,131	0	0
DJIBOUTI	0	63,803	(9,603)	(178)	0	0
ADEN	0	20,790	75	6,144	(455)	11,050
BERBERA	0	30,000	(492)	(15,497)	(1,128)	(589)
DHUBA	0	110,829	300	8,492	0	0
YANBU	0	0	711,354	24,976	0	0
JEDDAH	24,976	711,354	0	0	0	0
MINOR PORTS	0	(605,568)	6,712	8,000	47,800	600
TOTAL	25,738	277,045	385,109	241,017	46,842	11,061

MAJOR SHIPPING ROUTES, FEEDER SERVICES AND COASTAL TRADE KINGDOM OF SAUDI ARABIA 1990



COASTLINE CONTOURES APPROXIMATE SAUDI/DR.W./KARGRAFK/22.12.1990

3 SHIPPING CONNECTIONS IN THE RED SEA:

Before describing amount and types of cargo transported along the Saudi Red Sea coast, the shipping connections to its neighbouring countries have to be taken into account:

3.1 Jeddah Islamic Port:

Jeddah Islamic Port, between the years 1989 and 1990, doubled its regional exports, while cutting back by three-fourth on its imports: during 1989, ships were travelling on an average rate of one per day between Jeddah Islamic Port and Port of Aqaba. This amounted to 60,660 metric tonnes shipped to Aqaba, but only 2,200 tonnes imported into Jeddah. Even this low figure towards 1990 decreased to an estimated fourth of exports, while imports almost tripled.

Between Jeddah and Hodeidah there is an average shipping connection of one vessel every two days. During the year 1989, 32,600 metric tonnes went from Jeddah to Hodeidah, with hardly any cargo returning. During 1990, these exports almost doubled.

Onward connections to Mocha and Aden are provided by Mocha Line and Yemen Gulf Line (since 1989 merged into Falcon Container Line) on a fortnightly basis using container / breakbulk vessels.

Ferry and regular feeder services between Jeddah and Port Sudan during 1989 shipped almost twice as much cargo into Jeddah than into Port Sudan. During 1990, this relation totally reversed, when Jeddah exported almost ten times as much cargo into Port Sudan than it received.

During 1989, Jeddah traded only low cargo volumes with ports in the southern Red Sea and the Gulf of Aden. While trade with Ethiopia remained static into 1990, exports to Berbera halved, and imports from Djibouti went down to a fourth of their 1989 level. In contrast, exports to Aden more than tripled.

Transshipment with destinations in the Red Sea and the Gulf of Aden represent almost 20 percent of total transshipment volumes. During September 1990, the weekly feeder service to Port Sudan and into the Gulf of Aden closed its operation due to termination of many shipments with destination Arabian Gulf. Since then, transshipment of containers into Aqaba (18,000 tonnes during 1989 and 1990), being the main proportion of its trade with Jeddah Islamic Port, is conducted by mainline vessels.

Crude oil is discharged at the Jeddah refinery coming on a shuttle tanker service from Ras Tanura about 3 times a month.

3.2 Yanbu Industrial and Commercial Ports:

Between 1989 and 1990, exports from KFIP Yanbu into the region increased slightly by an estimated 2 percent: this trade is mainly conducted by special liquid bulk carriers, shipping an average 50,000 tonnes per load at an average rate of one tanker almost every second day.

Aqaba received some refined products during 1990 for the first time. Exports to Port Suez and Port Sudan remained stable on a high level, but export volume to Hodeidah halved by 170,000 tonnes. However, these losses were compensated by export gains into the other southern major ports.

Imports from the region into both ports were very low during the period: imports consisted of liquid feedstock into KFIP Yanbu, and of steel into Yanbu Commercial Port.

The national carriers connect Yanbu Commercial Port on call from Jeddah Islamic Port. NSCSA, during 1989, could spare a fortnightly ro-ro/breakbulk vessel, while UASC had Yanbu scheduled monthly with a container/breakbulk vessel.

The Petromin refinery receives its crude oil inputs directly from the trans-arabian pipeline and does not depend on any crude oil shipments.

3.3 *Gizan Port:*

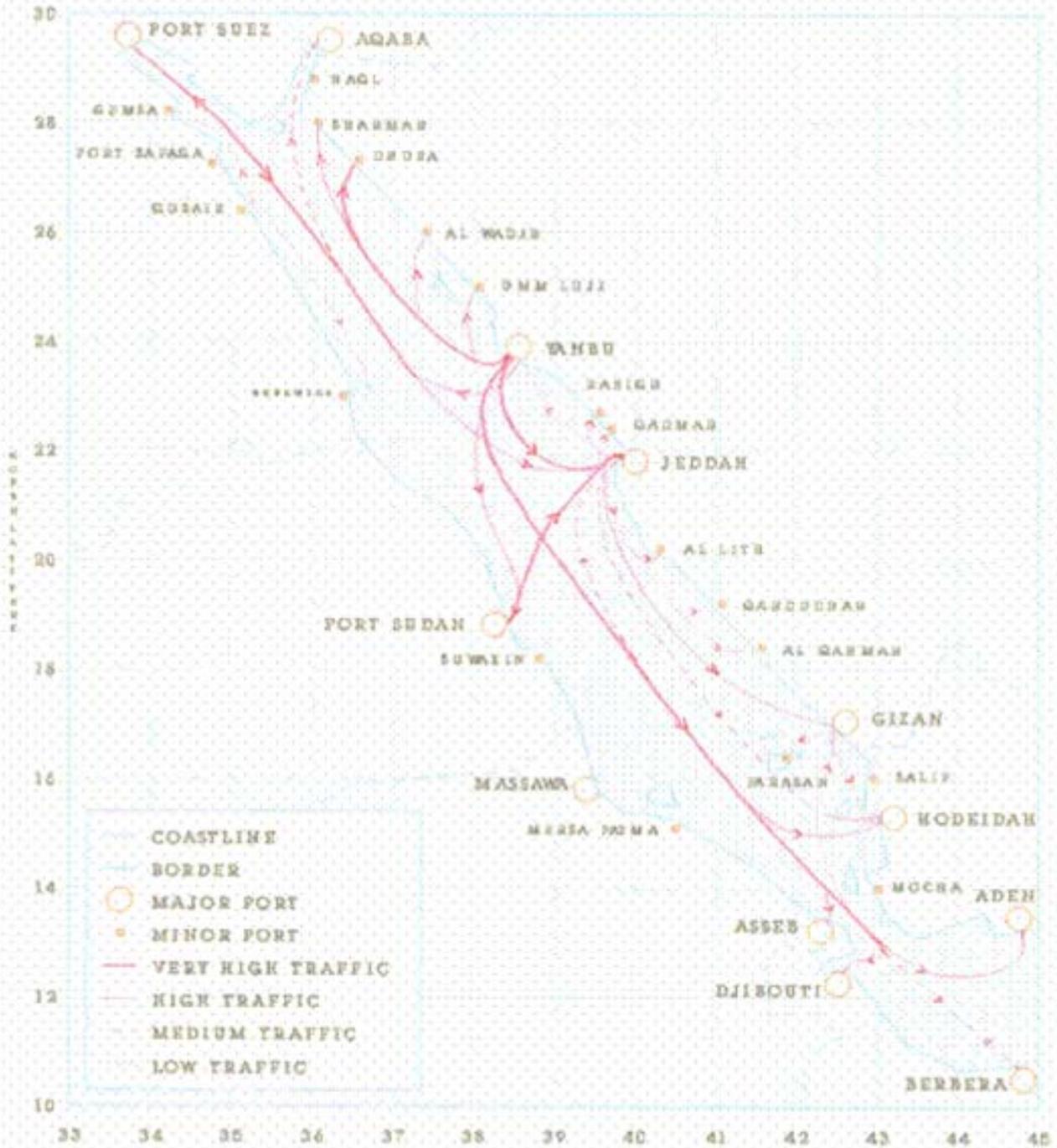
Gizan represents the Kingdom's local gateway into the southern Red Sea: sambouks conduct the short-range trade of consumer goods and agricultural produce into Hodeidah and its surrounding minor ports. These small vessels carry an average of 10 tonnes per trip, on an average of one sambouk every second day.

In contrast, trade with Berbera and Aden in the Gulf of Aden remained very sporadic. During 1989, one vessel imported cattle from Berbera, while another one exported black cement to Aden, during 1990.

The small Petromin bulk depot at Gizan is supplied by a 50,000 tonnes tanker for regional distribution on inducement basis. The tanker also distributes diesel directly to small supply ships, awaiting its arrival, for the local desalination plants.

REGIONAL AND COASTAL TRADE

RED SEA 1989



COASTLINE CONTOURS APPROXIMATE

REDSEAI/HARGRAPH/DR.W./24.12.1990

4 CARGO COMPOSITION OF SAUDI COASTAL TRADE:

Presently, there exist three different commodity types for coastal traffic, which are largely typified by the Kingdom's three Red Sea ports.

4.1 Consumer Goods and Foodstuffs:

From Jeddah Islamic Port, apart from the liquid bulk transport connection with Yanbu, transshipment cargo is distributed along the minor ports. This trade picked up immensely during the period, from a total of less than 3,000 tonnes, during 1989, to more than an estimated 26,000 tonnes during this year.

A high proportion in this increase are imports into Jeddah, which increased 25-fold to an estimated 7,000 tonnes during 1990, thus indicating a true trade pattern instead of a former mere one-sided distribution.

The main commodity group consists of consumer goods transhipped from Jeddah Islamic Port through international and national feeder services. Their share in total coastal trade increased from one third to two thirds within one year. Another related commodity are vehicles, at a decreasing proportion of about 10 percent of total in 1989 down to 1 percent in 1990.

While this trade from Jeddah is conducted by regular-sized vessels, Gizan Port with its small-craft port caters for the provision of its region with consumer goods and agricultural produce through sambouks, a trade that slightly increased during the period. Sambouks, for instance, conduct a regular transport of oil drums to Farasan Island, since this commodity is not allowed onto the ferry, and no liquid bulk facilities exist on the islands as yet.

Both arable agricultural produce and livestock are transported in very small quantities along the coast of the Azir region by sambouks. No coastal trade in these commodities exists in the areas further north in the Red Sea.

Direct fish landings in all minor ports vary between 100 and 2,000 tonnes per year. However, no trading in fish or other sea produce is conducted among the coastal villages.

4.2 Liquid Bulk Products:

KFIP Yanbu accounts for 90 percent of all coastal transport along the Kingdom's Red Sea coast. During 1990, an estimated 160 vessels shipped bulk, mainly diesel, along the coast. This transport is hardly distributive in nature, and consequently cannot be truly added into the category of coastal trade.

From KFIP Yanbu specialized liquid bulk carriers transport refined products and fuel oils to the Petromin bulk supply depot 4 km south of Dhuba. This relocative traffic accounted for 70 percent of the total traffic along the Saudi Red Sea coast.

Another 20 percent are fuel oil transports from KFIP Yanbu to the storage tanks in Jeddah, and to the military port of Ash Sharmah in the north, and minor loads to desalination plants in most minor ports, such as Al Haql, Dhuba, Al Wadjh and Um Lujj.

Some liquid feedstock required for the refinery process is imported from the Jeddah refinery. However, these products will be substituted locally over the medium-term future.

From the Jeddah refinery, bulk diesel loads are transported to the military port of Gadmah, and to the desalination plants in the minor ports of Mastabah, Al Lith, Qunfudhah and Al Qahmah.

Diesel shipments from the Jeddah refinery to the Petromin bulk supply depot are redistributed among the desalination plants of Shaqayq, Farasan and Tuha.

4.3 Solid Bulk Products:

These commodities are transported nationally on a very sporadic schedule. Steel and other semi-manufactured products rarely origin from inside the Kingdom. Rather it is transport-cost sensitive materials for construction inputs, which are shipped along the Saudi coast, such as one shiplot of clinker into Gizan Port during 1990.

5 INFRASTRUCTURE CONDITION OF MINOR RED SEA PORTS

Development of Saudi's coastal trade depends on three factors:

1. Port substructure and superstructure as a prerequisite for commodity trade requires a sufficient depth of access way and berth, and storing facilities for transit cargo.
2. Port hinterland and its population determine the immediate demand or supply of commodities, their volume and structure.
3. Port location and transport connections expand its function into feeder services for the region and as a transit gateway for commodity trade to the centres of the interior.

According to these three factors, potential for increasing coastal trade in the Kingdom requires a further investigation into the condition of Saudi's minor Red Sea ports, since so far minor ports were only extended to provide for direct imports of foreign building materials.

5.1 Al Haql:

The port, which comprises a jetty and transit sheds, is owned and operated by the largest private construction company in the northern region. There are no other port users and no passenger traffic. All the traffic passing through the port is either the company's own direct imports, or goods ordered via the company. During 1981, monthly imports consisted of 15,000 tonnes of bulk cement and 5,000 tonnes of steel fabrications and other construction materials. No bunkering facilities, cold storage and retail facilities are available.

Al Haql holds a total town and hinterland population of estimated 6,000 people, with a growth rate above national average. Fish stocks are extremely limited in the area, a conservative estimate during 1981 put the potential catch at 300 tonnes per year. Apart from port traffic, the town does not trade any commodities or services by sea. Exceptions

are construction materials, which come through the port as mentioned. Fuels come from the Petromin supply depot at Dhuba by road tanker. The town's desalination plant one km south has a jetty used entirely for the shipment of fuel oil from the Yanbu refinery. The border to Jordan 8 km to the north limits the catchment area considerably through customs procedures and regulations.

Al Haql is connected by asphalt road to Tabuk, the regional centre in 225 km distance. The town of Tabuk has a population of over 70,000 and a national airport. The nearest seaports are Aqaba 40 km to the north, and the military port of Ash Sharmah 190 km to the south. Supplies come from wholesalers in Tabuk, or from Jeddah directly by road.

5.2 Ash Sharmah:

Military projects use the naval port of Ash Sharmah, about 20 km to the east of Al Khuraiba, and represents an important destination of fuel oil shipments from KFIP Yanbu.

There is no population resident in the hinterland of Ash Sharmah, the nearest town with about 5,000 people is Khuraiba.

Ash Sharmah is connected by a 280 km asphalt road to Tabuk, and to the 100 km distant Dhuba in the south.

5.3 Dhuba:

The port of Dhuba is scheduled for finalization of its extension in 1993. By end-1990, the port's substructure such as quays and storage areas was in place, but work on the superstructure such as sheds and other buildings had not yet started. Dhuba is a government port open to public, and was frequented about once a month by chartered vessels importing construction and consumer goods via the Suez Canal.

The town's hinterland has little agricultural potential, but a high population of more than 35,000. The Petromin bulk supply depot, located 4 km south of town, is the distribution centre for refined fuel in the Tabuk region. Tankers call three times a week, discharging about 5,000 tonnes on each trip into the storage tanks for road distribution. Additionally, the desalination plant 1 km north of town, has a jetty solely for its shipments of fuel oil.

Port extension also comprised upgrading of a 180 km direct road to Tabuk, and of a 160 km southbound track to Al Wadjh, location of the nearest national airport. With the exception of construction materials and other bulk cargo that is directly imported, most of the town's supplies come from Jeddah by road. Some is from Tabuk, and fresh fruit and vegetables are shipped by road from Jordan.

5.4 Al Wadjh:

The port of Al Wadjh, which comprises a rather shallow berth on the inlet just south of town, is a government port open to public use with a customs office on site. Once a very busy port with regular sambouk coastal trades, the port during the 1980s received 3-4 vessels a month, importing cement and other construction materials.

The hinterland of Al Wadjh is not fertile, but more productive than the area further north. The catchment population is estimated at 45,000, holding considerable flocks of sheep and goats. The town's desalination plant has a jetty for the shipment of fuel oil as a separate and self-sufficient facility.

The construction of the direct road to Dhuba shortened the distance to Tabuk to 280 km. The coast road south to Umm Lujj, 170 km away, is two-lane asphalt in good condition. Substantial quantities of barley are shipped by road to Al Wadjh from Jeddah for animal feed, however, no meat is being exported to other areas of the Kingdom.

5.5 Umm Lujj:

The port of Umm Lujj, which comprises a jetty located near the centre of town in a largely exposed position, was once a busy cargo port with regular sambouk coastal trades. It was last used for cargo and passenger traffic many years ago. Today the only port users are fishermen. Annual landings are in the order of 1,000 tonnes. Fishing activity by a large fleet of more than 100 boats is correspondingly high.

The hinterland of Umm Lujj is less fertile than the one surrounding Al Wadjh to the north. The population in the catchment area is estimated at 50,000. The town's desalination plant, one km to the south of the jetty, has its own jetty for the separate shipment of fuel oil from the Yanbu refinery.

Tabuk is 445 km to the north on a direct route via Dhuba. However, the town is more closely tied to Yanbu, Medina and Jeddah to the south. Yanbu is 155 km away on a two-lane tarred road. Supplies for Umm Lujj, such as fruit and vegetables, are from Jeddah and Yanbu by road. Only occasional construction materials come from Al Wadjh in the north.

5.6 Rabigh:

Rabigh has not been used as a port for cargo traffic for over 30 years, and even then it was no major Red Sea port. There is no jetty or berth. Nor was the port ever used by hajjis or other passengers, thus the only users are fishermen. Annual fish landings amount to approximately 700 tonnes.

On the south side of the inlet, a refinery and associated deepwater port has been constructed for a Petromin/Petrobra joint venture. The refinery is supplied by the crude oil carriers Petroship A and Petroship B on a 10-day shuttle service from Ras Tanura, discharging about 100,000 tonnes at Rabigh or Jeddah refinery. The deepwater port includes a general cargo berth for project cargo. However, the port does not provide facilities for Rabigh and its hinterland.

The town of Rabigh is located 6 km from the Red Sea coast. The hinterland of Rabigh is largely barren with little agricultural development, and no other economic activity. Population including hinterland is estimated at 30,000. The town's desalination plant has a jetty for separate shipment of fuel oils.

Rabigh is 230 km from Mecca, the regional centre, via direct asphalt road. Commercially, the town is tied to Jeddah, 150 km south by asphalt road. The nearest airport is Jeddah, and the nearest seaports are Yanbu to the north and Al Qadmah 65 km south. Supplies

for the town and its surrounding villages are all from Jeddah by road. Even though Yanbu is equidistant with Jeddah, no commodities are imported through Yanbu.

5.7 Qadmah:

The military port of Qadmah was constructed at a deepwater bay until 1978 originally for import of construction materials. No further facilities exist at the inlet for civilian use.

The town of Qadmah is located 8 km north of the inlet. Its hinterland is largely barren, the total population is estimated at 20,000. Its economy is largely based on fishing. Landings amount to some 100 tonnes per year, and are destined for consumption in Jeddah.

Commercially, the region is fully within the catchment area of Jeddah, 85 km further south by asphalt road. All consumer goods are imported from there via road.

5.8 Al Lith:

The port of Al Lith, which comprises a jetty and coastguard base 5 km from town, is open to public use. Al Lith was once a very busy port serving regular sambouk coastal trades and functioning as a major port for cargo and passengers to Mecca. Now the only cargo passing through the port in decreasing quantities is on smaller vessels from Sudan. The cargo, mostly sheep, oil and grain, is transited on road vehicles to Jeddah consignees. Additionally, more than 200 fishing boats land about 700 tonnes of fish per year, mostly destined for the Jeddah wholesale market and transported via road by traders.

The hinterland surrounding Al Lith is among the most fertile of any of the small ports, supporting extensive sheep farming and arable agriculture. Consequently, the population in the catchment area is estimated at 80,000. Crops in excess over local consumption, especially watermelons, are sold in Jeddah.

The town of Al Lith is 190 km from Mecca by asphalt road. Jeddah is another 70 km further, but also accessible by coast road 195 km away. The nearest airports are in Jeddah, Mecca and Taif to the north. To the south, there is an asphalt inland road in excellent condition through to Gizan. Another asphalted coastal road connects to Al Qunfudah, 150 km south.

5.9 Al Qunfudhah:

The port of Al Qunfudhah, which comprises a jetty extending over flats to a rectangular quay, is a government port open to public use. Once a very busy port with regular calls by ships from all over the Red Sea and the Mediterranean directly supplying most of the area's requirements, the port has fallen into disuse. The last cargo to move through the port was 25 years ago, the consequence of road improvements and the growth of Jeddah Port. There is no passenger traffic, so that Al Qunfudhah is now solely a fishing port. Mostly professional Yemeni fishermen land about 2,000 tonnes of fish per year.

The hinterland of Al Qunfudhah is among the most fertile of the small ports, supporting extensive sheep and goat farming, and arable agriculture. The population of its catchment area is estimated at 240,000, of which two villages have populations of over 20,000 each. A thriving boat-building industry exists in the town. A market of about 20 stalls is also sited

in the centre of town. However, although there is widespread traditional agriculture, the area is a net importer of foodstuffs.

Al Qunfudhah is 340 km from Mecca by a road asphalted along its entire length. Foodstuffs, together with all other supplies including fuel, come from Jeddah by road. To the south, the coastal road leads to Al Qahmah at 175 km distance, and further on to Gizan with a national airport in 245 km distance.

5.10 Al Qahmah:

The port of Al Qahmah, which comprises a jetty 6 km south of town, is under control and administration of the coastguard. It was never used for traffic other than for imports of construction materials and plants. Since completion of the road, it was not used at all, except by coastguard vessels. Fish landings in the area are around 400 tonnes per year.

The hinterland of Al Qahmah has very limited agricultural potential, being largely barren. Reflecting this, there are only few settlements in its catchment area. Its low total population is estimated at 18,000.

Al Qahmah is 174 km from Gizan, the regional centre, by a new asphalt road. With the exception of fish and local produce, all the town's supplies are imported by road from Jeddah, Gizan or Abha, depending upon the commodity. Fuel is from the Gizan bulk depot by road tanker.

5.11 Farasan:

There are two jetties on the island of Farasan. The coast-guard jetty with terminal building at Al Khor, 15 km from the town of Farasan, is an inlet at the closest point on the island to Gizan. The jetty was designed not for coastguard vessels only, but also for the ferry, which is operated by the coast-guard as a public service.

There are 3 inhabited islands in the Farasan group between 40 and 50 km due east of Gizan. The main islands are connected by a bridge and asphalt roads. There is no airport. The principal activities on the islands are government employment, construction, fishing and trading. Agriculture, both livestock and arable, is minimal. However, the Farasan islands lie in the richest fishing area in Saudi Arabian waters. Due to their isolation from the mainland, together with a small population, only about 400 tonnes of fish are landed per year by more than 100 fishing boats. The population of all three islands is estimated at 8,000 and growing slightly. The islands' desalination plant has a jetty for the separate shipment of fuel oil from the Gizan bulk supply depot.

With the exception of the islands' very limited agricultural produce and its fish, all supplies are imported from Gizan. The ferry links the islands with Gizan 4 times a week and is free for both goods and passengers. All traffic except fuel travel on the ferry, which takes up to 40 vehicles and 200 passengers, and is frequently full. Fuel is imported in oil drums carried on small commercial vessels, since there are no bulk-handling facilities available.

5.12 Other Minor Ports:

There is no port or infrastructure at Al Khuraiba, merely a beach with deep water very close to shore, and a small coast-guard compound in 2 km distance.

Khuraiba's population is estimated at 5,000, with strong outmigration into urban areas such as Tabuk. The fish catch is estimated at some 100 tonnes per year.

The town of al Khuraiba is connected by a 290 km asphalt road to Tabuk, and to the 100 km distant Dhuba in the south. Most of the area's supplies come from Tabuk, though some are from Dhuba, including fuels from the Petromin supply depot. Occasionally, goods travel directly from Jeddah by road.

The desalination plants of Maqna, Mastabah, Shugayg and Tuha run jetties for the separate shipment of fuel oil.

The town of Maqna is located about 100 km south of Al Haql on the road from Aqaba to Dhuba. The latter's bulk supply depot provide fuel oil to the desalination plant. Mastabah is situated about 70 km south of Jeddah on the road from Jeddah to Al Lith. Shugayg is located 120 km to the north, and Tuha 80 km south of Gizan, from where they receive fuel oil shipments.

6 CONSTRAINTS AGAINST COASTAL TRADE:

Today, coastal shipping along the Saudi Arabian Red Sea coast is virtually non-existent, with the exception of fuel oils and other refined liquids being shipped from KFIP Yanbu to Dhuba, Jeddah and Gizan. Distribution of transshipment goods from and into Jeddah Islamic Port by small and medium-sized vessels is slowly picking up. However, it could not replace the heavy sambouk coastal trade that was wiped out of existence by the construction of asphalted coastal roads and the predominance of Jeddah Islamic Port. Rudimentary sambouk connections only survived in the Gizan region, providing shipping connections also across the border into Yemen.

6.1 Present low local Demand:

All ports in the Red Sea and the adjacent gulf of aden can now be categorized into a 7-tier hierarchy of importance:

- I. Jeddah, Aqaba
- II. Aden, Port Sudan, Djibouti
- III. Massawa, Hodeidah, Yanbu
- IV. Asseb, Gizan, Dhuba, Port Safaga, Khalij, Mocha
- V. Al Wadjh, Gemsa, Al Qunfudah, Al Lith, Rabigh
- VI. Suwakin, Mersa Fatma, Salif, Farasan
- VII. Al Haql, Umm Lujj, Al Qahmah, Qadmah, Al Khuraiba.

Some of the sites particularly in category vii, although technically feasible for coastal shipping, can still not attract enough cargo for transportation, and therefore offer little prospect for economically viable investment. These sites are generally located in sparsely

populated, remote areas with no industrial production. They therefore have limited levels of final consumption, intermediate inputs and final outputs for export and final domestic demand. The lack of cargo in such areas may have been the reason for dropping all investment plans for coastal shipping ports.

A fundamental precondition of coastal shipping, however, is that enough cargo be available for transportation between the ports to make investment in this transport economically viable, both for the national economy and for future private investors. In order to make it worthwhile, the costs of coastal shipping must be lower than that for any other alternative mode on the link in question, and future investors must generate a certain operating surplus to invest in this traffic. For this purpose, a coastal vessel needs a capacity utilization of at least 50 percent to break even. A strict application of transport cost minimization would reveal, that systematic coastal shipping of commodities other than crude oil and refined products does not reach the economic break-even point.

6.2 Competition from Road Transport:

Applying a rule of thumb for the general cargo and container trade, road transport is usually more economic than rail or ocean transport on distances below 500 km. Rail transport becomes more economic on distances above 500 km, while ocean transport is usually the most economic mode of transport on distances above 1,000 km, provided of course that sufficient cargo is available.

Therefore, coastal transport will only be competitive on long-distance routes, on which good volumes of cargo are regularly moved and on which there are as yet no direct road connections.

Of the total inter-GCC cargo volume, about 80-90 percent is transported by road. With the construction of modern highways, overland transport has become cheaper and faster than ocean transport. There is no shortage of trucks and trailers, which can be readily ordered by telephone. Documents for road transportation are easy to complete by exporters. The truck driver takes personal care of commodities transported on his truck.

Door-to-door deliveries offered by truck are of great advantage, since selling terms are usually on 'free house' or 'free construction site' basis. Often overland routes are quite shorter than ocean routes, especially if shippers or receivers are not located close to a port. Delays in ports are extremely expensive for coastal vessels as against main liner vessels, which usually stay in port for a few days for cargo handling.

Overland routes save double handling costs at ports, thus reducing additional expenses and damage risks. The 'broken transport' required in case of ocean transportation - truck transport from factory to loading port, vessel from loading to discharging port, truck from discharging port to final destination - causes additional transport and handling costs. Departure times of vessels are often not suitable, and delays in arrival cause expenses in form of waiting-times of trucks.

Finally, importers and exporters follow a cash-flow philosophy, by which they keep purchases in small lots, avoiding capital-intensive stock-piling. These lots have the right size for truck transportation, but are uneconomic loads for vessels.

Consequently, road transport especially from Jeddah poses a severe competition, although the sheer distance to the major centres on the Red Sea coast means that road

transport costs are high. However, there is a considerable element of back-loading with vehicles delivering goods to Jeddah from Jordan or Syria, taking the opportunity to deliver goods to Tabuk or further inland to Al Jawf on their way back. Also, with the prevailing overcapacities of the trucking industry, truck companies offer attractive rates (including the return of empty containers) in order to employ their huge fleet of trucks.

6.3 *Low Interest of International Lines:*

In general, Red Sea ports are treated as way ports on the Arabian Gulf and Far East services. This means that their traffic is given lowest priority at peak times, and is priced at marginal cost only during slumps. Only on services which terminate in East Africa or the Red Sea itself, are they considered as base ports. However, the main liner shipping companies offering coastal transport facilities are a great competition to local ship owners, as they are in a position to offer low freight rates covering their marginal costs only.

Constraints to divert international shipping lines to any minor ports consist of already tight schedules with a large number of ports of call, a general desire to minimize disruption of trunk services, administrative problems with conference members, and favour of streamlined services with limited ports of call.

Inducement cargo for vessel diversion during the 1980s was in the area of 1,500 tonnes of additional freight cargo. Taking into account freight rates, inducement cargoes ranged around 500 tonnes of mixed general cargo, and at 2,000 tonnes of low-rated bulk cargoes such as cement and construction materials.

Such cargo volumes require a definite increase of the present levels of local demand, which could not be satisfied locally or through other means of transport.

6.4 *Bulk Dedication of Port Superstructure:*

While the demand for food and consumer goods is more directly related to population growth, demand for building materials, and for agricultural inputs, depends more on specific projects and the general activity in the area. Most of the minor ports were extended during the construction boom, which necessitated imports of large quantities of construction materials.

Port usages will in future have to be rededicated to the changing patterns of demand. Particularly, under the impression of the present gulf crisis, a dedication of Dhuba or Yanbu ports entirely for military requirements, similar to Qadmah, seems possible for the time to come.

Sambouk trade is competitive for certain commodities and trades. Coastal ship owners have higher operating costs and higher voyage costs than sambouks, which quite often load and discharge their cargoes at special low-fee wharfs by their own crews.

7 POTENTIAL FOR COASTAL TRADE

7.1 Expansion of Local Demand:

Under an average annual population growth rate along the Red Sea coast similar to an estimated national rate of 3.8 percent, local consumption will almost double during the period 1980 to 2000. Demand for imported food products will grow accordingly.

The fifth national development plan proposes development centres at Haql, Dhuba, Al Wadjh, Umm Lujj, Rabigh, Al Qunfudhah, Sabya, Farasan and Samitah. Particularly Al Wadjh and Al Qunfudhah are fast becoming major coastal towns, supported by the provision of a civil airport or good road communications. Given their central locations, their relatively high population densities and considerable planned construction activities, they would seem to be the two minor ports with a possible potential for development of cargo traffics.

Road transport from the Jordanian border poses less competition to potential coastal trade. Because the north coast produces fewer goods which could be exported north across the border, there are less opportunities for backloading, which results in higher costs. Drivers are consequently more unwilling to accept goods for Saudi Arabia, if this means that opportunities are lost for the substantial rewards from haulage from Aqaba to Iraq. In addition, the lack of full-scale customs facilities at Durrah on the Jordanian border means that much traffic from Aqaba travels on the main inland road to Tabuk.

7.2 Development of the Fishery Sector:

The Kingdom's rich fish resources along its Red Sea and Arabian Gulf coastal strips, estimated of having an annual catch potential of about 500,000 tons, have merely been tapped until now. Present catch realized is about 10 percent of total resources available. Local consumption is above this fish production, and growth of domestic demand until the year 1994 is expected to increase on average by 4.1 percent annually.

Beside fostering coastal trade, development of the fishery sector in the minor ports and development centres would provide employment, improve local income, and help to improve the food supply situation to an expanding community. Potential levels of exploitation of the resource run to several 1000 tonnes per year around Farasan Island, and to rather high levels offshore Al Wadjh. Small concrete jetties, floating walkways, mooring posts, chilling facilities, storage sheds should be provided for the priority use of the fishing fleet.

7.3 Transport of Solid Bulk Products:

Major deposits of metallic and industrial minerals exist along the coast, whose exploitation becomes increasingly feasible. The fifth national development plan identified interesting mineral deposits along the Red Sea coast such as potash deposits around Gizan, Al Qunfudhah and Al Wadjh, iron deposits at Wadi Sawawin near Dhuba, and silica sand deposits east of Khuraiba.

Additionally, limestone deposits for clinker along the coast could be better utilized for the production of cement in Gizan, whereas iron deposits would serve as feedstock for the steel plants in Yanbu. Coastal transport of these commodities would be feasible since they are cost-sensitive for road transport.

Since the mid-1980s, cement plants located in Yanbu, Jeddah and Gizan have capacities to satisfy the local demand and provide supply for adjacent countries. However, cement is mainly a 'project commodity' for which direct delivery to specific construction sites in the hinterland is preferred. Therefore, road haulage by special trucks is generally considered the best mode of transport, and potential for coastal transport exists only in areas, which are not well served by coastal roads.

Scrap iron feedstocks (about 100,000 tonnes per year) for steel mills such as SULB in Jeddah is locally purchased and represent another potential commodity for coastal transport along the Red Sea coast, if more such companies establish in the industrial areas of Jeddah or Yanbu. The same applies to the lime input (about 50,000 tonnes per year), which is also obtained locally.

However, due to their nature, these bulk cargoes are shipped by special vessels in full loads on tramp basis, and are therefore not suitable for a regular coastal shipping service. Sabic for instance still distributes all its dry bulk products within the GCC by truck and not by vessel.

7.4 Distribution of Liquid Refined Products:

The Yanbu refinery will increasingly provide the Petromin bulk depot with liquid refined products. For the year 2000, a transport volume of 1 million tonnes per year is estimated.

Because of increasing demand in the southern region and the construction of an efficient fuel oil bulk plant at Khmais Mushait, which can be supplied more cheaply from Gizan than from Jeddah (given its capacity restrictions), shipment between Yanbu and Gizan should increase rapidly to 4.5 mil. tonnes per year in the year 2000. Under this objective, Gizan will supply the districts of Abha, Baha, Gizan and Najran.

As a result of transport-cost minimization, deliveries of crude oil and refined products to Jeddah Islamic Port and refinery should consequently increase by 40 percent during the period.

As all the petrochemical units produce feedstocks increasingly for other local basic industries, there exists a potential for development of coastal transport by specialized liquid bulk carriers, especially since NSCSA purchased nine such vessels.

7.5 Diversion of International Lines:

At the same time, competition for cargo is particularly fierce at Jeddah, with a consequent displacement of smaller operators. Sudan shipping line for instance was increasingly looking for ways to compete with big operators, for instance by offering a 'door-to-door' service.

The port facilities required to support diversion are minimal, and consist of sufficient draft and clear marking of channels, and of sufficient berthing space at a solidly constructed quay.

Many main liner shipping companies would consider feedering the Red Sea coast and into the Arabian Gulf by road transit via the Kingdom, thus saving the long sea voyage around the Arabian peninsula and utilizing the low freight rates offered by Saudi Arabia's truckers to employ their overcapacities.

Also, there appears to be a fairly encouraging cargo potential on the Saudi Arabia - Oman route. About one-third of the trade from Oman to the Kingdom is shipped by vessels, while the ocean transport in the other direction lies at only 10 to 20 percent.

During the plan period, the transshipment volume will also become of great importance within the Red Sea area. This volume is controlled by foreign shipping companies. It should be possible for an efficiently and reliably operated coastal transport company to obtain a share in this business.

Many Saudi ship owners, which presently are engaged not in coastal services, but in the Red Sea short-sea trade, might take up services on this route, especially if reduced port charges for coastal shipping services helped to reduce their costs of ocean transportation.

8 RECOMMENDATIONS:

1. Government investment into coastal shipping should remain restricted to transport of liquid cargoes, plus a small amount of distributional traffic of other project bulk materials.
2. Delegation of the creation of a coastal transport company to the national shipping corporation of Saudi Arabia, and its operation with small, fast and reliable ro-ro vessels, or
3. Operation of a coastal transport company by the private sector through the formation of a cooperative, and through general government incentives.
4. First preference should be given to national coastal trans- port companies for utilization as common-user feeder service.
5. Transshipment at Jeddah Islamic Port should be permitted and facilitated for all kinds of commodities.
6. Customs procedures should be simplified for purposes of road transit through Dhuba port into Jordan, through Jeddah Islamic Port into the Arabian Gulf, and through Gizan Port into Yemen.
7. Complicated coordination procedures between customs, port authorities, police and other services should be streamlined in minor ports to facilitate local trade across the Red Sea.
8. Main liner shipping companies should be restricted to carry inter-Red Sea trade according to the UNCTAD Code of Conduct (cargo sharing principle reserving 80 percent of trade to national carriers and 20 percent to cross-traders).

9. Port superstructure such as sheds should be earmarked for coastal trade in the Kingdom's minor ports with sufficient agricultural potential and population density.
10. Reduced port and cargo handling charges for coastal shipping services should be introduced to promote coastal trade.
11. Bunker subsidies should be extended to national shipping companies and private fishing boats without existing rather complicated administrative procedures.
12. Attractive financial terms and conditions should be offered to national ship-owning companies for the purchase of vessels.
13. Negotiations between SEAPA and main industrial companies, such as SABIC, should investigate potential of bulk transport.