Preliminary Information Memorandum for Advisory Services for Development of Shipyards at Karachi and Gwadar

Pakistan & its location

Location

Pakistan is strategically located at the mouth of the Gulf. It lies at the junction of four important regions i.e. Oil rich Gulf to the West, Energy rich Central Asian Republics to the North West, fastest growing economy of China to the North East, India to the East and the strategic North Arabian Sea as its southern boundary with 1,064 km of coastline. Hence, it is ideally positioned to serve as a major trade route and energy corridor for the region. Additionally, international trade routes to and from the Gulf pass just off its coastline.

The country has a total area of 796,095 sq km and is nearly four times the size of the United Kingdom. From Gwadar in its south, the country extends more than 1,800 km to the Khunjerab Pass on China's border. It has a population of approximately 160 million hard working people.

Economy of Pakistan

The economy of Pakistan has remained buoyant and thriving despite political uncertainties and major catastrophes like earthquake in the country. This progress is the outcome of substantial macroeconomic reforms since 2000, most notably privatizing the banking sector. Poverty levels have decreased by 10% since 2001, and Government has steadily raised development spending in recent years, including a 52% real increase in the budget allocation for development in FY07.

Pakistan's growth performance over the last five years has been striking. Average real GDP growth during 2003-07 was the best performance since many decades, and it now seems that Pakistan has decisively broken out of the low growth rut that it was in for more than one decade. Economic growth has been notably stable and resilient. With economic growth at 7.0 percent in 2006-07, Pakistan's real GDP has grown at an average rate of 7.0 percent per annum during the last five years (2003-07) and over 7.5 percent in the last four year (2004-07) in running. The outcomes of the outgoing fiscal year indicate that Pakistan's upbeat economic momentum remains on track at 7.0 percent in 2006-07.

Compared with other emerging economies in Asia, this puts Pakistan as one of the fastest growing economies in the region along with China, India, and Vietnam.

The following characteristics auger well for Pakistan to emerge as a major shipbuilding hub in the region:

- Commercially strategic location
- Vibrant economy at takeoff point, right stage for such projects
- Availability of large reservoir of skilled work force at competitive costs

Ports

Pakistan has three ports viz. Karachi Port, Port Qasim and the newly developed Gwadar port. Karachi and Port Qasim are the major operating ports at present,. Gwadar, with 14.5 meters depth, is expected to emerge fast as it has already been given on long-term lease to world-class port operators, Port Singapore Authority (PSA).

Karachi Port

The Karachi Port has 28 general cargo berths with draft of 10 to 11.3 m and three oil jetties, two are capable of handling 75000 tons dead weight ships, the third Jetty is being reconstructed to serve 75000 DWT ships. The Port has adequate covered and open transit storage areas for storage of General cargo and containers with effective security and Fire fighting system. The Port also provides Buffer storage area for Export cargo including bulk commodities for exports.

Karachi International Container Terminal

KICT is operational at the West Wharf. KICT over the years has expended in phases. Previously with only Phase – I functional, it had an annual capacity of 350,000 TEU, with 3 modern Gantry Cranes, 6 RTGs and many other associated equipment. In the second phase KICT has added a ship to shore gantry crane, 4 rubber tyre gantries etc. increasing the terminal capacity to 525,000 TEU. This was US $ 65 million investment.

Phase III was launched on March 7, 2005. It will have an additional area of 104,000 sq.m with an investment of US$ 55 million. Terminal capacity shall be increased to 700,000 TEUs. The 973 m long berths of the terminal will be deepened to cater for 14 meter draught container ship. Completion of Phase-III is in March 2008.

Pakistan International Container Terminal

KPT has awarded a second Container Terminal on BOT in June 2002. This Terminal at Berths 6-9 East Wharf has 600 m quay wall with - 13.5 m depth, and 450,000 TEUs planned capacity. Two modern gantry cranes and associated equipment were deployed in Phase-I. This was a US $ 75 million project. Works in Phase-II & III have also completed and one more ship to shore gantry crane has been deployed

Bulk Cargo Terminal

Annual handling of bulk cargo at the port is 3 mt. Private sector has been invited to set up a dedicated bulk cargo terminal at East Wharves. KPT will provide 630 m quay wall from berths 10-13, along with 215,000 sq m of terminal area. Bids are under evaluation. Expected investment is US $ 20 million

PARCO Pipeline

The present PARCO White Oil Pipeline plan originates from the single FOTCO oil berth at PQA and terminates at KOT Addu. This pipe routing will isolate KPT's three modern oil berths from handling any white oil cargo for up country. KPT, therefore, on its own initiative, has had a study conducted to integrate Karachi Port's infrastructure for liquid products handling with the national infrastructure. This would mean connecting Keamari to Port Qasim facilities of Zulfiqarabad Oil Terminal, Bossicor Refinery, and the PARCO pipeline. Pipeline has been laid.

Expansion Plans of Karachi Port

Deepening of Channel

A detailed Feasibility Study for Deepening of Channel was conducted by M/s HR Wallingford of UK, which recommended 13.5 m depth to cater for 12 m draught vessels at all tides. This project is being launched at an estimated cost of US $ 30 million (Rs 1.75 billion). KPT is presently acquiring the latest and state of the art dredgers and plans to carry out the dredging through its own equipment and resources.

Pakistan Deep Water Container Port

As the new generation of Container ships comes on the drawing boards, Karachi Port takes the initiative of bracing itself to handle and cater for fifth and sixth generation ships. This involves the development of deep draught berths and due to its strategic location Keamari Groyne is the natural choice. The berths shall be built at 18 m depth, with 3.75 km of quay wall. Provision of 10 berths has been made in the plan. The project shall be carried out in phases and on public private partnership. Cost of project is US$ 1087 million. KPT shall share US$ 345 million.

Cargo Village

Setting up of a satellite facility in the vicinity of the Port, enveloping all the port requirements is a recent concept all over the world. 1303 acres of land is proposed for the project with individual areas catering for containers, general and bulk cargo, processing plants, customs and other related facilities. It will also have connectivity to M-10 and Lyari Express Way. Phase-I will comprise an area of around 330 acres. Infrastructure development cost of project is US $55 million. Expected investment is Rs 6300 M. Design consultancy has been awarded to M/s Inros Lackner, Germany and design of project is in progress.

Hinterland Connectivity of Port to Cargo Village(Bridge over Channel)

The plans for connecting the Deep Draught Container Terminal with the Cargo Village at Western backwaters are on, with bridge of span 300 m and height 60 meters. The causeway length shall be approx. 6 kilometers. Engineering Consultancy for this project has been awarded to M/s Leonhardt Andra & Partners of Germany and feasibility study for the project is underway

Berth Reconstruction Plan

The project is part of KPT's vision, which provides capability of port to synchronize with development & handling of modern vessels around the world. As per the consultant's recommendation of the study, 10 of 30 berths should be reconstructed at 16 meters depth in three phases. In Phase-I Reconstruction of Berth 14-17 shall be carried out. Design consultancy has been awarded to M/s Scot Wilson Kirkpatricks of UK and design of berths with appointment of contractors is in progress.

Liquefied Natural Gas (LNG)

LNG is coming up as the fuel of the future. Presently it is being introduced in many countries and progressively being marketed all over the world. KPT is also in a process of setting up LNG import facilities in Western Backwaters. For which 150 Acres have been earmarked. Many entrepreneurs have approached KPT and proposals received which are under consideration. Cost of project is US$ 500 million.

Coal Terminal

To cope with environmentally hazard coal, a separate terminal is also planned by KPT in western backwaters. The terminal shall be exclusive for handling coal and shall have 2 berths with capacity 50,000 tons.

Port Qasim

The other Port "Port Qasim is located approximately 50 Km South-East of Karachi and became fully operational in 1983. The Port facilities include a 1,400-meter long multi purpose terminal, which is divided into seven berths of 200 meters each. There is also a 279-meter special berth for handling of bulk Iron Ore and Coal for Pakistan Steel. The berth is connected with steel mill facility through 4.5 meter elevated conveyor. The Port also has one Oil Terminal set up under Private Sector for handling of liquid bulks including Fuel Oil and Petroleum. This Port handles an average of 7.2 millions tons cargo of which about 3 million tons is liquid cargo.

Expansion Plans of Port Qasim

LPG Terminal

An LPG Terminal at a cost of US$ 25 million has been developed at the port by PROGAS on Build-Operate-Transfer basis. The Terminal with handling capacity of 2.0 million tons per annum will accommodate vessels up to 30,000 DWT. A cargo volume of 29,000 tons has already been handled at the terminal. The Terminal was formally inaugurated on May 25, 2007

FWQ - Liquid Cargo Terminal

A dedicated Liquid Cargo Terminal at a cost of US$ 11.4 million with a designed capacity of 4 million tons per annum is being developed at the port. So far 25 % construction work has been completed. Dredging work commenced in March 2007. The project is scheduled to be completed by January 2008.

QICT- 2nd Container Terminal

To handle increased volume of container traffic, 2nd Container Terminal at a cost of US$ 211 million with handling capacity of 1.175 million TEUs is planned by Dubai Port World on BOT basis. The 1st phase of the project is scheduled to be completed within 24 months from the date of signing of the Implementation Agreement. Soil investigation has already been completed.

Establishment of Grain & Fertilizer Terminal

Grain and Fertilizer Terminal with handling capacity of four million tons, on BOT basis, is planned to be developed at the port at a cost of US$ 50 million. Letter of Intent has been issued and negotiation on Implementation Agreement will commence shortly.

Establishment of LNG Floating Terminal by M/s Pakistan GasPort Limited

Implementation Agreement for development of LNG Floating Terminal by M/s Pakistan GasPort was signed on April 28, 2007. The terminal with handling capacity of 2 million tons per annum shall be completed at a cost of US$ 160 million. Project launching ceremony was held on May 26, 2007.

Establishment of LNG Floating Terminal by M/s Granada Group

Approval in principle granted for establishment of LNG Floating Terminal to M/s Granada Group of Companies. The terminal with design capacity of 3.5 million tons per annum is expected to be completed at a cost of US$ 200 million. Technical proposal received on 21st April 2007 and evaluated by M/s ECIL, the PQA consultants.

Coal, Clinker/Cement Terminal

PQA plans dedicated Coal, Clinker/Cement Terminal at a cost of US$ 50 million with handling capacity of 4 million tons per annum. Expression of Interests were invited and 5 firms have been prequalified. Guidelines ,prepared by M/s NESPAK, for submission of Technical and Financial proposals have been issued to prospective bidders. Award of the project is expected by November 2007. Completion period of the project is two years.

Establishment of 2nd Oil Jetty

To handle crude oil and finished products of proposed Indus Oil Refinery, 2nd Oil Jetty with handling capacity of 9 million tons at an estimated cost of US$ 20 million is planned to be set up at the Port. The jetty shall be capable to accommodate vessels of 75000 dwt vessels. FOTCO have appointed M/s Techno Consultants and Royal Haskoning of UK who are finalizing Technical and Financial proposals.

Establishment of 2nd IOCB

On the request of Pakistan Steel Mills, 2nd IOCB has been planned at the port with handling capacity of 8 million tons per annum at a cost of US$ 50 million. The berth shall be capable to accommodate vessels of 75000 dwt class vessels. Implementation of the project shall synchronize with expansion of Pakistan Steel Mills.

Deepening and Widening of Navigational Channel

To accommodate larger ships, PQA plans deepening & widening of the navigation channel at a cost of Rs. 5367 million.

Gwadar Port

Gwadar Port in Balochistan has recently been developed as the third major port. Its operations and management has been leased to the World renowned Port Singapore Authority (PSA). Newly built coastal highway passes next to the port. Other road and rail linkages are also under construction to facilitate its links it to hinterland and provide direct linkage to the Central Asian region.

Gwadar Port Future Development Plan:

Multipurpose terminal

- Further expansion up to a total berth length of 4,5 km. General cargo, container, ferries, cars, clean dry bulk (with restrictions), bunkering, water supply
- 4-5 km entrance channel with two turning basins

- Berth depth: -14.0 m C.D.
- Deck elevation: +4.6 m
- Backup storage area: 380-600m wide behind berths, 600 TEU/ha
- Equipment: as required
- Buildings: CFS facilities, customs house, workshops, office buildings, possibly covered warehousing

Container Terminal

- First project: 3-4 berths
- 2400 m entrance channel and one turning basin
- Berth Depth: -14.0 m C.D.
- Deck elevation: +4.6 m
- Backup storage area: 500-1000m wide behind berths, 600 TEU/ha
- Equipment: as required
- Buildings: administration/customs, workshops, (CFS in Free Zone)
- Next expansion with 4 berths

Liquids/Chemicals Terminal and Clean Dry Bulk Terminal

- 500 m wharf, 2 berths or more
- 800m entrance channel and one turning basin
- Berth Depth: -14.0m C.D.
- Deck elevation: +4.6m
- Backup storage onshore with storage for fuel oils, grains, fertilizers, chemicals, edible oils etc.
- Equipment: pneumatic continuous ship un-loader, conveyor systems, front end loaders, liquid un-loading arms, piping and manifolds
- First expansion if required

LNG Terminal

- Wharf consisting of discharge platform, 3 tubular steel breasting dolphins, 4 mooring dolphins
- 4000 m entrance channel (shared with Liquid Bulk Terminal) and one turning basin
- Berth depth: -13.0m C.D. or more
- Platform elevation: +6.0m
- Backup storage area onshore with LNG terminal facilities
- Equipments: liquid unloading arms (remotely controlled), piping systems and manifolds, firefighting systems (onshore and at the pier)

Liquid Bulk Terminal (petrochemicals)

- Two wharves, each consisting of discharge platform, 3 breasting dolphins and 4 mooring dolphins
- 4000 m entrance channel (shared with LNG Terminal) and one turning basin

- Berth depth: -15.0m C.D.
- Platform elevation: +6.0m
- Backup storage area onshore with tank farm
- Equipments: liquid loading/unloading arms (remotely controlled), piping systems and manifolds, fire fighting systems, onshore and at the pier
- Further expansion before 2020

Dirty Dry Bulk Terminal

- Finger pier: 2 berths
- 3200 m entrance channel and one turning basin
- Platform elevation: +6.0m
- Berth depth: -14.5m C.D.
- Backup storage area onshore for stockpiles
- Equipments: 4 clam-bucket ship un-loaders, chutes to transfer material to conveyors, conveyor systems on pier, trestle and in storage yard, material stacker / re-claimer systems

Situation Analysis of Ship Building Industry – International

Current Trends

- Between 2002 and 2006, the international order book for shipbuilding jumped from 115.5m dwt to 300.0m dwt.
- Over the last 50 years, sea trade has grown much more than growth of World GDP, despite periodical fluctuations. With world GDP growing at much faster, compared to previous decades, sea trade will also grow accordingly. Hence it is envisaged that long term demand for more ships will continue.
- Some international reports envisage that trend in demand for new ships will increase from around 30 m dwt a year at present to around 90 million deadweight a year in 2055.
- Shipbuilding is also benefiting as offshore oil production grows. Offshore production share is growing, currently estimated at 30% of global crude oil output.

Shipbuilding is a global as well as labor intensive industry. Hence it suits developing economies the most. Accordingly, in last few decades the global shipbuilding industry has shifted from West to East. Presently South Korea, China and Japan dominate shipbuilding market. These countries have their capacities full and with ever increasing labor rates, other developing countries have great scope to embark on this important industry.

Situation Analysis of Ship Building Industry – Domestic

Salient Features

Shipbuilding

- At present, more than 80 % of our trade is carried by foreign ships. Hence we need much more ships than what we have now.
- Vibrant growing economy, will further enhance requirement of ships
- Enhanced port requirements, will require more harbour craft like tugs, pilot boats, dredgers, barges etc.
- More ships will require more ship repair facilities
- Expanding naval and Maritime Security Agency requirements to monitor EEZ.
- Demand for oil rigs for exploration on land and off shore

Pakistan National Shipping Corporation "PNSC" is an autonomous corporation, which functions under the overall control of the Ministry of Ports and Shipping, Government of Pakistan. It manages a fleet of only 14 ships at present but has plans to increase it tremendously. The new shipping policy calls for expansion of the Pakistan flag merchant fleet, so as to increase its share of cargo, which at present is less than 15 % of national trade. Opportunities of huge transit market offered by Afghanistan and Central Asian States also need to be capitalized through compatible development of the cargo fleet and port facilities; and revival of national ship building capacity to meet the essential requirement of the Pakistan Merchant Marine.

Ship repair

Existing Situation and current Short fall in Docking Requirements

Last year 3,000 ships visited KPT and PQA in Karachi area only. None of these ships could be provided ship repair services as, the only two small docks currently available fall much short of even domestic requirement. Domestic shortfall is estimated to be 69 docking months annually

The President of Pakistan while chairing a meeting on "Development of shipbuilding industry in Pakistan" said, "Shipbuilding industry can become the country's great asset due to its potential and would contribute to the uplift of national economy and poverty alleviation. Pakistan should concentrate not only on ship repair but also shipbuilding and needed shipyards with much bigger docks to accommodate larger vessels."

.

Karachi Shipyard and Engineering Works Limited (KSEW)

As part of Government decision to develop shipbuilding industry on a large scale, it has put in concerted efforts and finances recently into KSEW to revamp it. It already has capacity optimization plans underway, as part of which it plans to install a Ship Lift and Transfer System to enhance its capacity in order to meet fast growing requirements. However, at present site, scope of further expansion is very limited. Therefore Government has decided to go for two more world class shipyards with much larger capacities catering to the future as well.

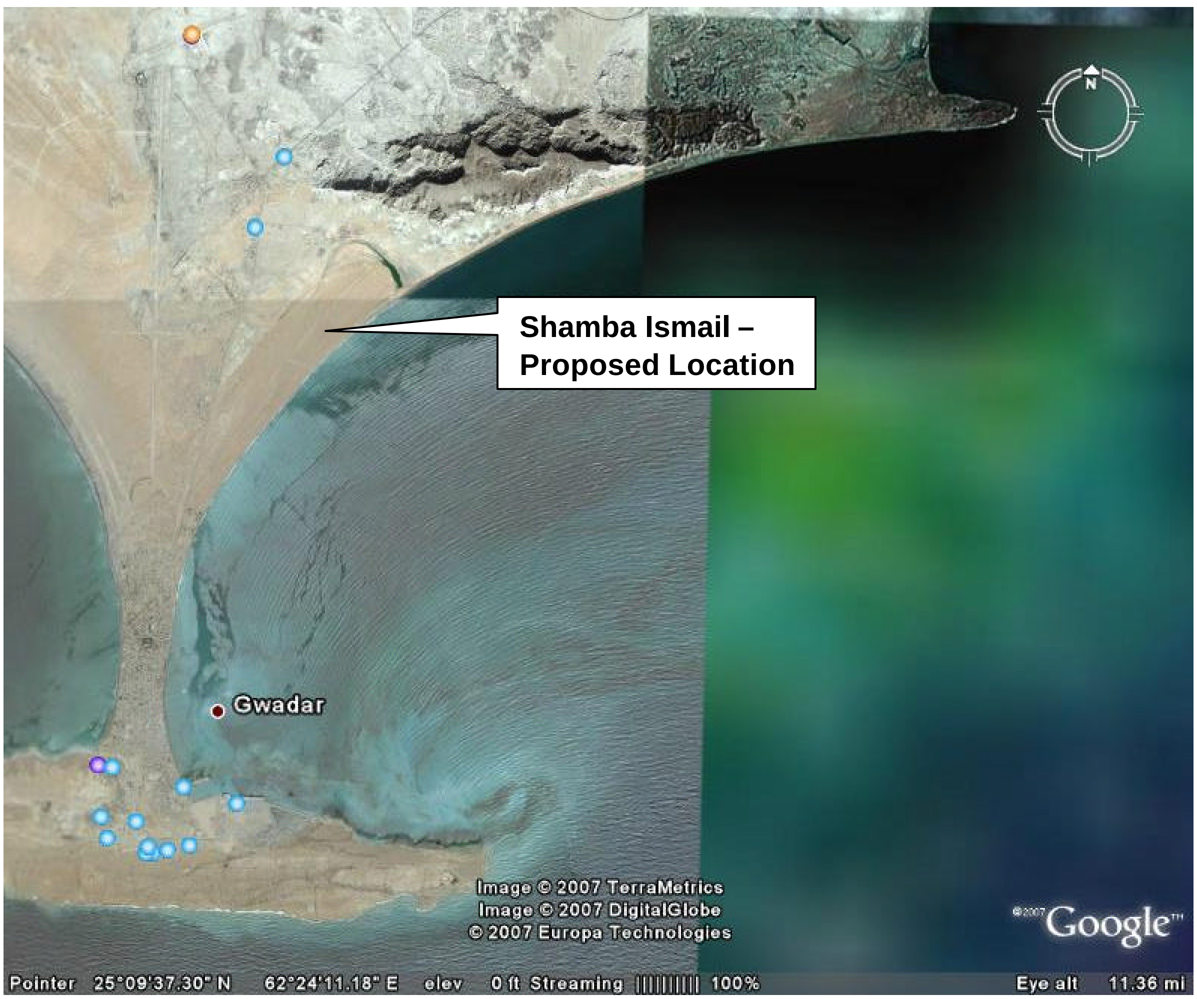
Karachi Shipyard and Engineering Works Limited is an unquoted public limited company incorporated in Pakistan under the Companies Ordinance, 1984. The principal activities of the company are shipbuilding, ship- repair and general engineering. The factory was incorporated in 1957, started commercial production in May 1957 and is located at Dockyard Road, West Warf, Karachi

Karachi Shipyard is the only shipyard in the country at present...Facilitates include two dry docks of 16,000dwt and 26,000dwt capacities and three slipways for shipbuilding along with relevant workshops , cranes etc. . It is designed to carryout Shipbuilding and Ship repair business for the local and foreign customers. The major local customers are Pakistan Navy, Shipping Corporation (PNSC), maritime Security Agency (MSA),Karachi Port Trust (KPT), Port Qasim Authority (PQA), Gwadar Port Authority (GPA) in the public sector and vide range of customers in the private sector have been well served over the last fifty years. KSEW also has the capability of manufacturing Heavy Engineering Products of a wide range all Heavy Steel Structures, Pressure Vessels, LPG storage Tanks, Industrial Boilers, Overhead and Portal Cranes. Complete Sugar and Cement Plants etc. KSEW has a large Machine Shop comprising heavy, medium and light machine tools and various Fabrication Shops.

Site Details for Proposed Shipyards

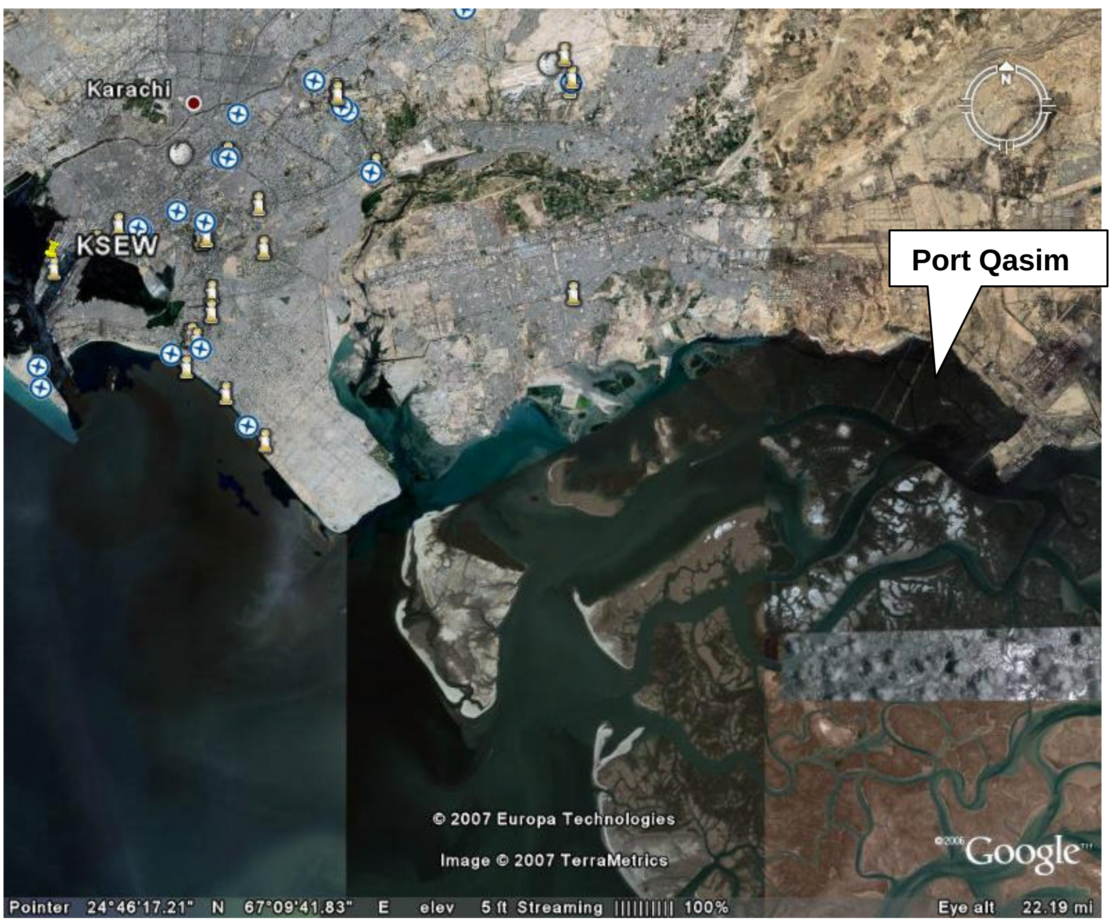
Gwadar (allocation of approx. 500 acres of land at Gwadar Port Authority adjacent to Shamba Ismail)

The Gwadar port was inaugurated on 20th March 2007. Gwadar, a district of Balochistan enjoys a strategic position on the coastline of Pakistan. Balochistan in general and Gwadar in particular has been neglected in the past but its 600 km long coastline has been brought to the lime-light by the present government which is determined to develop this Port into one of the most modern Ports in the world. This port would be an integral component of the trade corridor for Central Asian states, China and the Gulf as 60 percent trade of oil and gas is done through this route. A deep sea port like Gwadar is already attracting global attention, and once it is fully active, Gwadar will become one of the important gateways to prosperity for the people of Pakistan in general and Balochistan in particular. Gwadar could spur economic progress through out the region by reducing the transport time between China, Middle East, Central Asian States, Europe and Africa. Some experts even estimate that Pakistan could earn up to US $ 60 billion per annum out of transit trade when Gwadar Port and the National Trade Corridor are fully developed and operational. The operation and management of the port was recently handed over to the Singapore Port Authority (SPA) under a 40 year agreement between the Gwadar Port Authority (GPA) and the Concession Holding Company (CHC) a subsidiary of the GPA that is operating 22 ports in 11 countries. The company will invest $ 550 million in next five years. The port will not only promote trade and transport with Gulf States, but will also provide transshipment of containerized cargo, unlock the development potential of hinterland and will become a regional hub for major trade and commercial activities.



Port Qasim (Allocation of approx. 500 acres of land at Port Qasim Authority adjacent to Fish harbour)

Port Qasim is fast becoming a major contributor to national economy of Pakistan with an impressive growth in port operations. During 2005-06 cargo handled at the port increased by 10.8 percent from 21.3 million tons to 23.6 million with the increase of marine traffic by 8 percent. The cargo handling during July- March 2006-07 increased from 16.8 million tons to 19.7 million tons over the corresponding period last year. This is an increase of 17 percent which is higher than 14 percent increase recorded for the same period last year. During the last 3 years a marked improvement has also been witnessed in revenue growth. The revenue generation over the last five years was increased from Rs. 2 billion to Rs.3.4 billion. The PQA is currently pursuing a large number of projects for capacity enhancement and industrialization, attracting foreign direct investment (FDI) and simultaneously undertaking major infrastructure development to enhance its efficiency. The port has already attracted US $ 1.5 billion of FDI.



Government Initiative for developing Shipbuilding Industry

The Government has accorded high priority to the ship building industry in Pakistan. The Government's proclaimed vision can be summed as:

"To make Pakistan a leading shipbuilding country of the region, in line with its true potential and ideal location, thus contributing towards our economic development and poverty alleviation"

The imperative for the Government initiative is driven by the realization that:

- The shipping industry can scale new heights and Pakistan can emerge a major maritime service nation, a key link in the world logistical chain
- The Pakistani maritime community can attract major engine and equipment makers to set up manufacturing units in the country, which would make the input costs of these materials for building ships competitive

To facilitate the development of this important national objective, Government has constituted a high level Policy Board headed by the Prime Minister of Pakistan to provide Policy initiatives for establishment and development of Ship Building and marine Industries in Pakistan. The Board is also responsible for facilitating the development of large Ship yards at Port Qasim and Gwadar Port and to ensure acquisition of land and provision of all related infrastructure. The Board has been empowered to approve the transaction structure of Shipyards at Port Qasim and Gwadar Port.

The Policy Board includes the following as its members:

i. Governor Sindh
ii. Governor Balochistan
iii. Minister for Ports & Shipping
iv. Minister for Defense Production
v. Minister for Privatisation & Investment
vi. Advisor to the Prime Minister on Finance
vii. MOS / Deputy Chairman, Planning Commission
viii. Chief of Naval Staff
ix. Secretary Ministry of Defense Production
x. Secretary, Ministry of Ports and Shipping
xi. M.D. Karachi Ship Yard & Engineering Works

The Government is also working on the development of an enabling framework to facilitate investments in the industry. Some of the incentives already in place for the industry include exemption from custom duties and sales tax. Other incentives being considered may include:

? Facilitating financing for Pakistani companies placing orders on Pakistani shipyards.

? Facilitating set up and development of allied and ancillary marine industries such as steel, paint, ropes, wire, cable, Diesel engines, Boilers, Generators, Air compressors, Electric equipment, motors, winches, outboard engines, pumps, valves, hydraulic equip, fire fighting equipment steering gear, Air conditioners, refrigerators, fans, heat exchangers, navigation / comm. equip, lights, Compass, radars, Cranes, davits, hatches etc.