

# CHINA

## Shenzhen Dapeng Bay Yantian Port 1st Phase Project

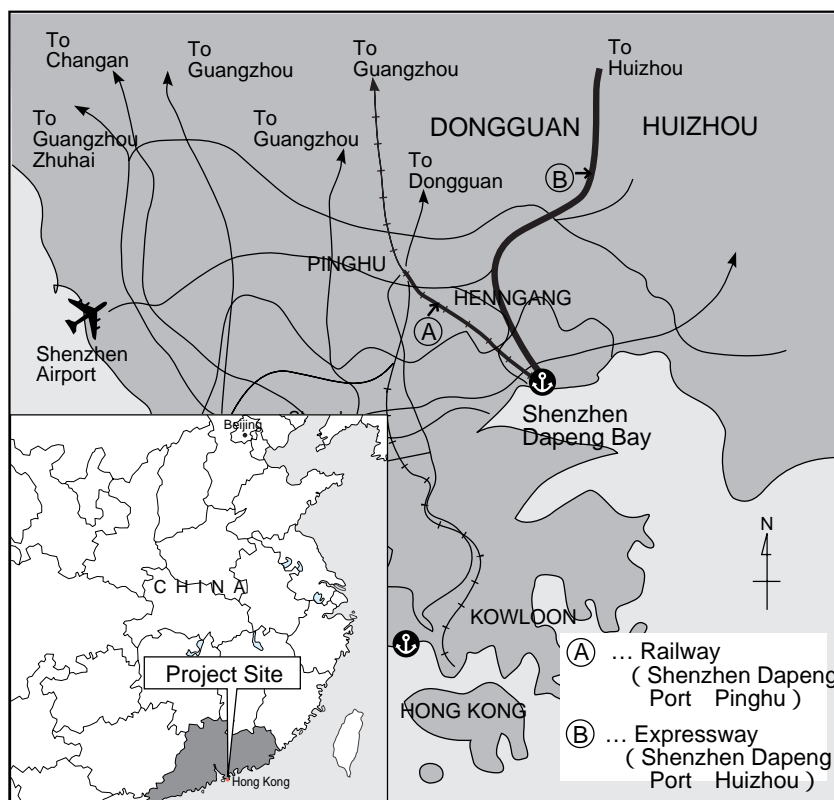
Report Date: March 1999

Field Survey: Not implemented

### 1 Project Summary and JBIC's Cooperation

As the 1st Phase of an entire plan (Shenzhen Dapeng Bay Yantian Port Construction Project: construction of a harbor with an annual cargo handling capacity of 13.5 million tons by the year 2000), this project is designed to construct and improve a harbor with the scale of the cargo handling capacity of 2.8 million tons per annum in the Shenzhen Dapeng Bay Yantian region of Guangzhou (six-berth pier: container berth × 1, multi-purpose berth × 1, bulk berth × 1, miscellaneous cargo berth × 3), and plus berthing facilities/equipment, a railroad outside the harbor (24km) and roads outside the harbor (72km).

The ODA loan covers the entire foreign currency portion of the project costs. The foreign currency portion includes the materials/equipment necessary for the construction and improvement of the harbor (excluding the three miscellaneous cargo berths), the roads outside the harbor, the railroad outside the harbor, and the ancillary facilities/equipment of harbor (for 6 berths including 3 miscellaneous berths), and consulting services necessary for the project implementation.



Borrower / Executing Agency	Foreign Trade and Economic Cooperation Department, People's Republic of China/ Ministry of Communications (Shenzhen Dong Pong Industry Co., Ltd. was in charge actually)
Exchange of Notes	December 1990 / September 1991 / October 1992
Loan Agreement	January 1991 / October 1991 / October 1992
Loan Amount	· 7,613 million / · 3,691 million / · 3,377 million (Total · 14,681 million)
Loan Disbursed Amount	· 7,448 million / · 2,966 million / · 2,679 million (Total · 13,093 million)
Loan Conditions	Interest: 2.5% / 2.6% / 2.6%, Repayment Period: 30 years (10 years for grace period), General untied
Final Disbursement Date	February 1996 / November 1996 / November 1997

### 2 Evaluation Results

#### (1) Project Implementation

##### (i) Project Scope

The project scope was completed mostly in accordance with the initial plan. One of the modifications made was to convert the multi-purpose berth (35,000 DWT) across to a container berth (occasioning the bulk berth to be converted to a multi-

purpose berth) in consideration of the increase in the international demand for containers. The conversion into a container berth was performed in order to cater to the increasing containerization on a global scale, and this modification was considered to be valid under the circumstances from the viewpoint of project operations (explained later.)

\*DWT = Dead Weight Tonnage: The unit used to express the size of vessels that handle only non-containerized freight by weight. It is expressed as the difference between total displacement tons when fully laden and the unladen displacement tonnage.

(ii) Implementation Schedule

Work was completed almost in accordance with the original plans, and no particular problems arose.

(iii) Project Cost

The project had an under-run of ¥1.588 billion (10.8%) to make an actual figure of ¥13.093 billion, as opposed to the planned ¥14.681 billion. The reason for this is that the low-priority items included in the harbor facilities and equipment were not procured.

The actual expenditures of local currency (not covered by ODA loan) were remarkably increased owing to the effects of price escalation within China. However, this additional amount was secured through domestic loans as the project progressed and had no adverse effects on the project's implementation schedule.

<b>Comparison of Original Plan and Actual</b>		
<b>(1) Project Scope</b>	<b>Plan</b>	<b>Actual</b>
(1) Harbor	Six-berth pier (container berth × 1, multi-purpose berth × 1, bulk berth × 1, miscellaneous berth × 3) + each of the ancillary facilities/ equipment	Six-berth pier (container berth × 2, multi-purpose berth × 1, miscellaneous cargo berth × 3) + each of the ancillary facilities/ equipment
(2) Railroad outside the harbor	24km	Same as planned
(3) Road outside the harbor	72km	Same as planned
(4) Consulting service Note: The three miscellaneous berths in the harbor are not covered by the ODA loan.	Bidding documentation reviews, acceptance of overseas training, etc.	Acceptance of overseas training (excluding the railroad.) Advice for computer system installation.
<b>(2) Implementation Schedule</b>		
(1) Harbor	January 1988 ~ December 1993	Same as planned
(2) Railroad outside the harbor	January 1991 ~ September 1993	Same as planned
(3) Road outside the harbor	January 1991 ~ September 1993	January 1991 ~ December 1993
<b>(3) Project Cost</b>		
Foreign currency	· 14,681 million	· 13,093 million
Local currency	897 million Yuan	2,175 million Yuan
Total	· 35,679 million	· 38,541 million
Exchange Rate	(at the time of appraisal) 1 Yuan = · 23.4	(Actual) · 11.7

**(2) Organization of the Executing Agency (implementation and operation/maintenance after completion)**

(i) Implementation Scheme

The executing agency's system of organization was reinforced with regards to the harbor, roads and railroad for the purpose of strengthening the supervision capabilities from a technical point of view for project implementation progress and construction.

(ii) Operations and Maintenance

YICT (Yantian International Container Terminal Inc.), Huiyan Highway Corporation and Shenzhen, Huizhou Railroad Corporation were in charge of management and maintenance for the harbor, the roadways and the railroad respectively. All of these agencies were established after the project was completed in order to perform the operations and maintenance duties. Operational results show that the harbor's handling volume has increased far above the expectations of the plan, with 640,000 TEU containers handled in 1997 and 1,040,000 TEU in 1998. The operational status of the railroad is also going well according to plan, but the roadway system is slightly behind than expected.

**(3) Project Effects and Impacts**

(i) Quantitative effects

The results of recalculating the FIRR for the project show a 5.3 point increase from the 8.3% of the original plan to 13.6%. Increases in revenue brought about by changes in cargo handling charge (unit price increases) and increases in cargo handling volume surpass vastly the increases of investment costs (based on local currency) and general management fees.

(ii) Qualitative effects

In addition to the direct benefits brought about by the construction of the harbor, roads and railway, it is thought that indirect benefits were also gained through the impetus occasioned from industrial development in the eastern region of Shenzhen city, the acceleration of city development in the Yantian region, and the hastening of economic development in the Huanan coastal region. It has also been reported that other effects have been prevalent, such as a transfer of harbor construction technology, the direct effect of job creation (approximately 300 people employed in the maintenance of the railroad, approximately 500 people on the roadway, and approximately 1,000 people in the harbor) and increased income for the local residents (although there is no quantitative data to support this).

The table below shows movements in the volumes of cargo handled and the usage of road and rail. The volume handled by rail is growing in proportion with the growth in container freight, but expressway usage is stagnating.

Movements of Actual Results in Yantian Port, Railroad and Expressway			1994	1995	1996	1997	1998
Yantian Port	No. of containers (TEUs)		12,800	106,000	353,500	638,400	1,040,000
	No. of liner shifts		78	208	312	418	n.a.
	Ships docking				1,200	2,100	n.a.
	Waiting time		0	0	0	0	n.a.
	Service time		6-7	7-8	8-10	9-10	n.a.
Railroad	Containers (TEU-km)	Incoming	n.a.	n.a.	3,700	13,800	5,900
		Outgoing	n.a.	n.a.	6,400	12,000	5,400
	Weight (ton-km)	Incoming	n.a.	n.a.	73,600	256,000	172,000
		Outgoing	n.a.	n.a.	4,600	111,000	74,900
Expressway (trucks/day)			8,800	6,300	7,900	7,800	n.a.

Source YICT Supplementary Report (Figures for rail for 1998 only include January to May).

### 3 Lessons Learned

Nothing in particular

(1) Crane Procured by ODA Loan



(2) Miscellaneous Cargo Berth in the Central Port Zone