

## 7.3 Major river ports outside Hanoi

### 7.3.1 Viet Tri Port

Viet Tri Port is located on the right bank of the Lo River and just downstream of the Viet Tri Bridge. Viet Tri Port is a nodal point of inter-modal transportation consisting of inland waterway (Lo River, Da River, Red (Thao) River), railway and road transportation.

Cargo throughput of Viet Tri Port is some 0.2 - 0.3 million tons or less than half of its designed capacity and main cargoes are marble stone and pyrite slug for loading, coal, clay, clinker and cement in bag for unloading. Hinterland of the port is Phu Tho province and its vicinity.

**Table 7.3.1 Outline of Viet Tri Port**

Item	Description
Port Authority	Inland Waterway Port Authority zone II
Port Operator	Viet Tri Port under NOWATRANCO
Design Approval	Decision No.298 dated on 3/12/1985
Designed Capacity	0.8 million tons / year
Area	Total Area: 15 ha, Storage Yard: 8 ha Warehouse: 5,000 m <sup>2</sup> , Workshop: 1,400 m <sup>2</sup>
Handling Equipment	Rubber-tired & Crawler Crane (40t): 07 Rail-mounted Crane (16t): 02 Fork Lift: 03, Truck (8t): 08
Access to the Port	Road: 1km to Highway No.2 Railway: 1.5km to railway for Lao Cai - Yun Nan and for Hanoi (different gauge)
Handling Charge (actual average level after negotiation)	2002: Coal=VND6,600/T, Cement=VND6,000/T, Construction Material=VND6.000/T 1998: Bulk=VND5,000/T, Cargo in Bag = VND10,000/T
Tonnage Dues	300VND/DWT (In: 150VND/DWT, Out: 150VND/DWT)

Source) Viet Tri Port under NOWATRANCO

**Table 7.3.2 Berths of Viet Tri Port**

Berth No.	Length	Width	Depth	Crown Elevation	Year Built
No.1	25m	20m	2.5m	+14m	1983
No.2	25m	20m	2.5m	+14m	1983

No.3	80m	30m	3.0m	+14m	1985
No.4&5	40m	15m	2.5m	+8.5m	1985
No.6	20m	10m	1.5m	+16.5m	1988
No.7	10m	18m	2.0m	+14m	1974

Source) Viet Tri Port under NOWATRANCO

**Table 7.3.3 Cargo Throughput of Viet Tri Port**

(Unit: 1,000 tons)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Throughput	203	210	219	254	158	177	240	181	189	254	357
Loading	18	24	33	115	55	56	76	97	97	99	115
Unloading	185	186	187	140	103	121	164	95	92	155	243

Source) VIWA, Viet Tri Port under NOWATRANCO

**Table 7.3.4 Major Commodities & Flow Pattern at Viet Tri Port**

(Unit: 1,000 tons)

	Major Commodities & Flow Pattern
Loading	Marble Stone: 62 (Yen Bai - Port - Hai Phong - export to Japan, etc.) Pyrite Slug: 40 (Lam Thao Fertilizer & Chemical Factory in Viet Tri - Port - Chin Phong Cement Factory) Fertilizer (Super-phosphate): 7 (Lam Thao Factory - Port - RRD) Gypsum: 4 (Yunnan of China - Port - cement plants in RRD)
Unloading	Coal: 129 (Quang Ninh - Viet Tri Port - Factories) Clay: 35 (Hai Duong province - Port - Tile Factory in Viet Tri) Clinker: 25 (Hoang Thach Cement Plant - Port - Clinker Grinding Factory) Cement in bag: 13 (from cement plants in RRD) Stone: 10 (from Hai Phong or Ninh Binh) Fertilizer (Nitrogenous): 3 (from Hai Phong)

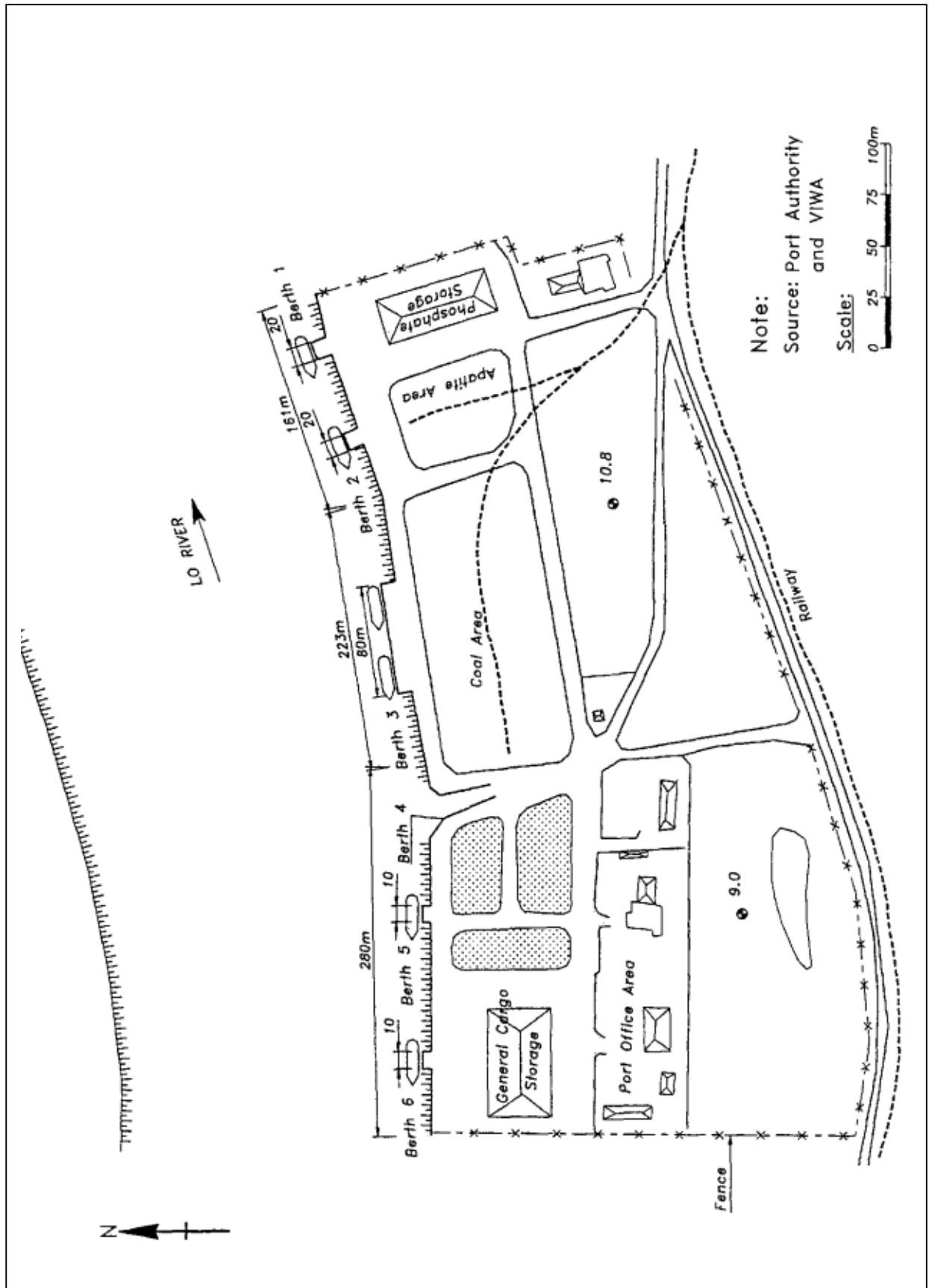
Note) Data: 2001 estimated

Source) Viet Tri Port under NOWATRANCO

**Table 7.3.5 Shipcalls & Vessel Size at Viet Tri Port**

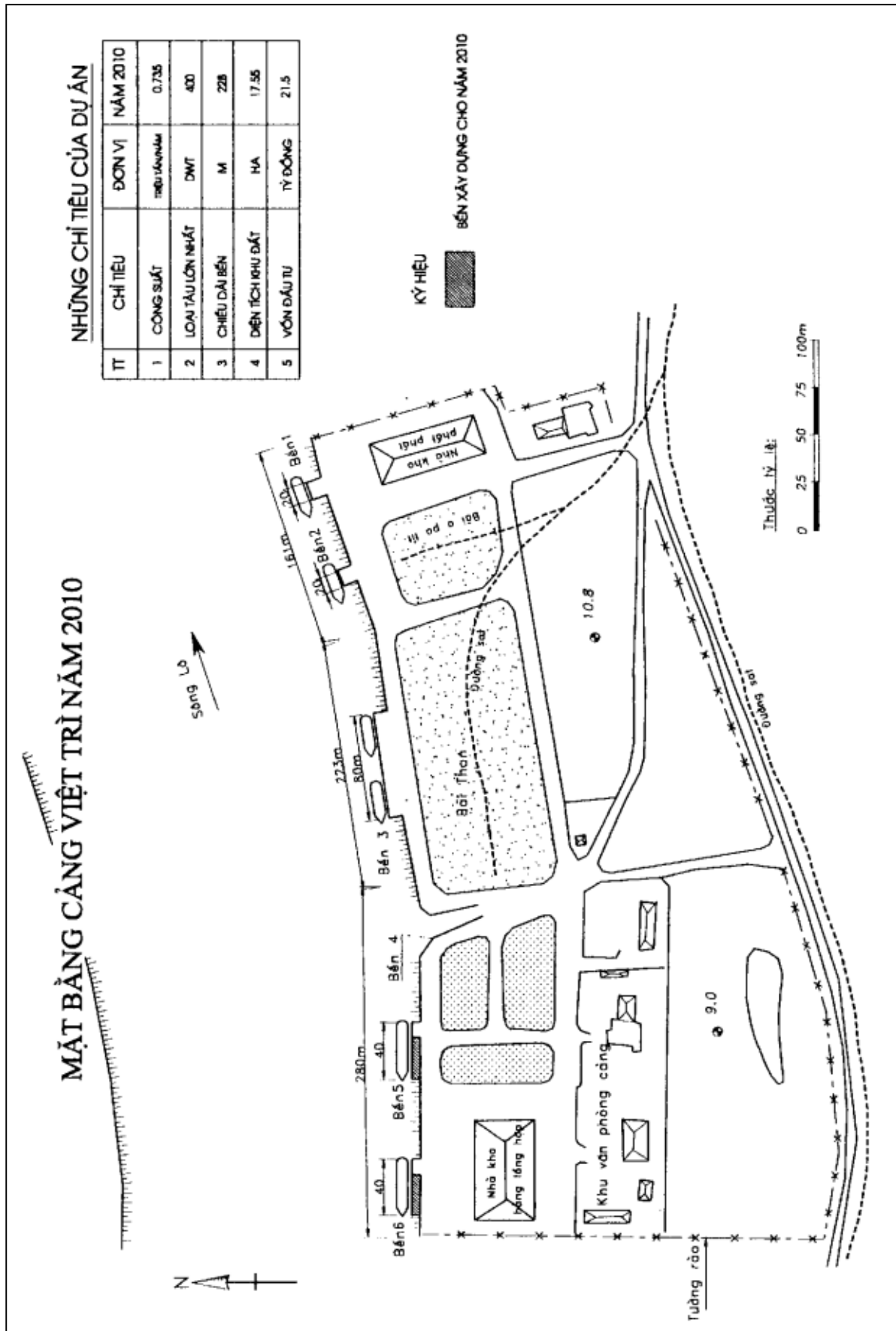
	1995	1996	1997	1998	1999	2000	2001
No. of Shipcalls	394	393	361	362	377	508	715
Total DWT	152,231	176,903	180,579	181,029	193,637	254,121	357,285
Average DWT	400	450	500	500	500	500	500
Max. DWT	900	900	1,000	1,000	1,200	1,200	1,200

Source) Viet Tri Port under NOWATRANCO



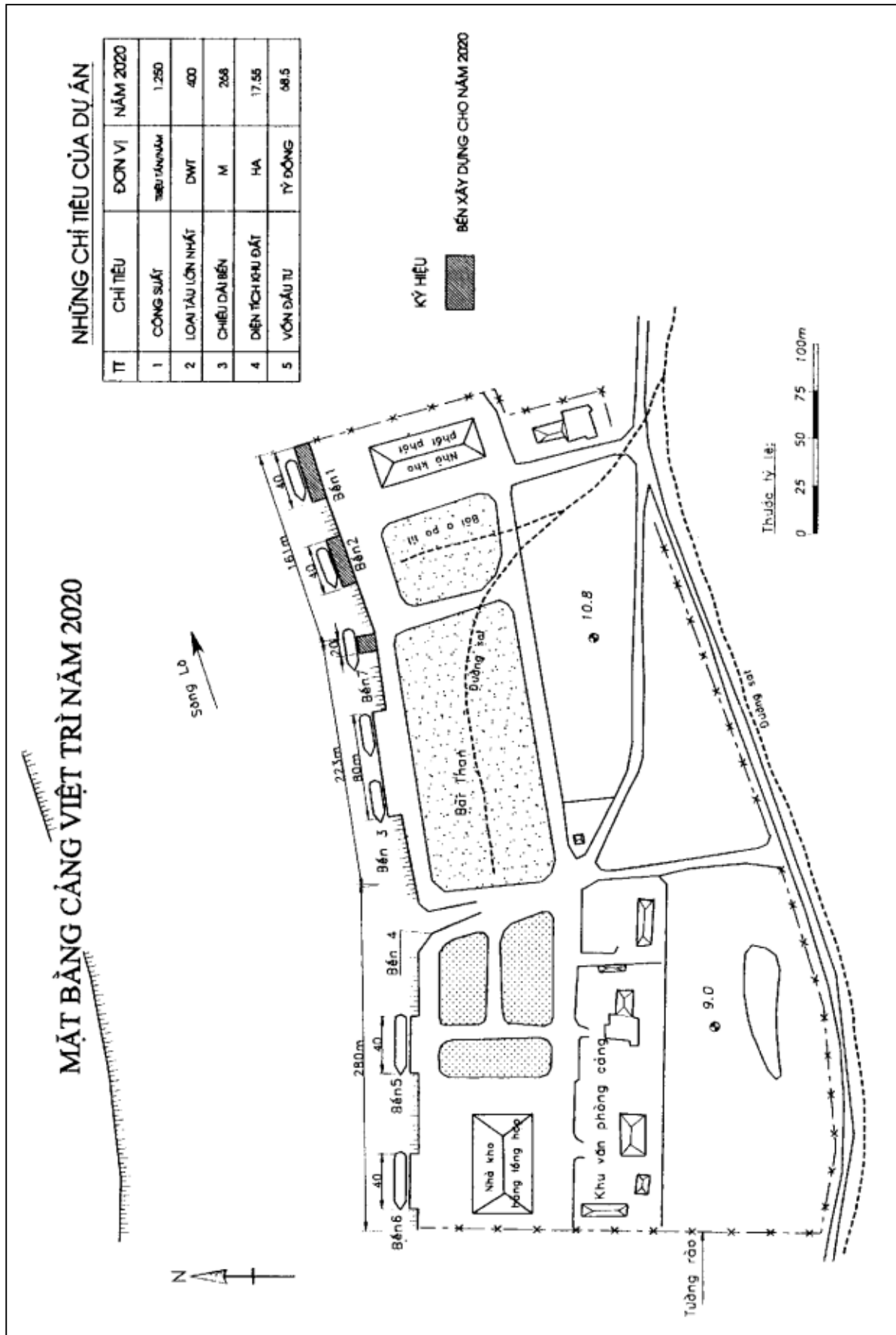
Source) Red River Waterways Project Vietnam, TA No. 2615 - VIE, Jan. 1998

**Figure 7.3.1 Layout of Viet Tri Port**



Source] M/P on Vietnam Waterway Transport Development up to 2020, Appendix 1, Nov. 2000, VIWA

**Figure 7.3.2 Master Plan of Viet Tri Port for 2010**



Source] M/P on Vietnam Waterway Transport Development up to 2020, Appendix 1, Nov. 2000, VIWA

**Figure 7.3.3 Master Plan of Viet Tri Port for 2020**

### 7.3.2 Ninh Binh & Ninh Phuc Ports

Ninh Binh Port is located on the right bank of Day River and 100 m downstream of Ninh Binh (Non Nuoc) Bridge. The main function of Ninh Binh Port is coal unloading for Ninh Binh Thermal Power Plant and Ninh Binh town.

Ninh Phuc Port is located on the right bank of Day River and 2.5 km downstream of Ninh Binh Port and 75km upstream of Day River mouth. Vicinities of the port are vacant land area and there is enough space for future development.

Port throughput (including But Son Port) has dramatically been increasing in recent years to 1.2 million tons in 2001. Main cargoes are coal and commodities in bag. Hinterland of the port is Ninh Binh province and northern part of Thanh Hoa province where large-scale plants are located such as cement plant, thermal power plant and fertilizer plant.

**Table 7.3.6 Outline of Ninh Binh & Ninh Phuc Ports**

Item	Description
Port Authority	Inland Waterway Port Authority zone II
Port Operator	Transportation and Unload Company of Inland Waterway under VIWA
Design Approval	Ninh Binh: 1978 Ninh Phuc: 1995
Designed Capacity	1.0 million tons / year
Total Area	(unavailable)
Storage Yard	Ninh Binh: 13.5 ha, Ninh Phuc: 0.5 ha
Warehouse	Ninh Binh: 900 m <sup>2</sup> , Ninh Phuc: 3,800 m <sup>2</sup>
Workshop	5,000 m <sup>2</sup>
Handling Equipment	Crane : 17 (Ninh Binh), 2 (Ninh Phuc) Belt Conveyer: 310m (Ninh Binh) Truck (10t): 60 (Ninh Binh)
Access to the Port	Road: inter-city & highway Railway: 2km
Handling Charge	2002: (unavailable) 1998: as agreement
Tonnage Dues	300VND/DWT (In: 150VND/DWT, Out: 150VND/DWT)

Source) Transportation and Unload Company of Inland Waterway under VIWA

**Table 7.3.7 Berths of Ninh Binh & Ninh Phuc Ports**

Berth No.	Length	Width	Depth (Elevation)	Crown Elevation	Year Built
N.B. No.1	7m	(-)	-3m	+3.5m	(-)
N.B. No.2	9m	(-)	-3m	+3.5m	(-)
N.B. No.3	5m	(-)	-3m	+3.5m	(-)
N.B. No.4	7m	(-)	-3m	+3.5m	(-)
N.P. No1	43m	(-)	-6m	+3.5m	1992
N.P. No.2	74m	(-)	-6m	+3.5m	(-)

Note) (-): Statistical data unavailable.

Elevation: shown in the National Elevation System (zero m = average water level in long period at the sea area near the Hon Dau island in Hai Phong city)

Source) Transportation and Unload Company of Inland Waterway under VIWA

**Table 7.3.8 Cargo Throughput of Ninh Binh & Ninh Phuc Ports**

(Unit: 1,000 tons)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Throughput	369	311	414	413	484	500	512	515 800	(-) 900	(-) 1,100	(-) 1,200
Loading	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	506
Unloading	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	506

Note) (-): Statistical data unavailable.

Throughput indicated in lower line includes that handled at another port.

Source) VIWA, Transportation and Unload Company of Inland Waterway under VIWA

**Table 7.3.9 Major Commodities & Flow Pattern at Ninh Binh & Ninh Phuc Ports**

(Unit: 1,000 tons)

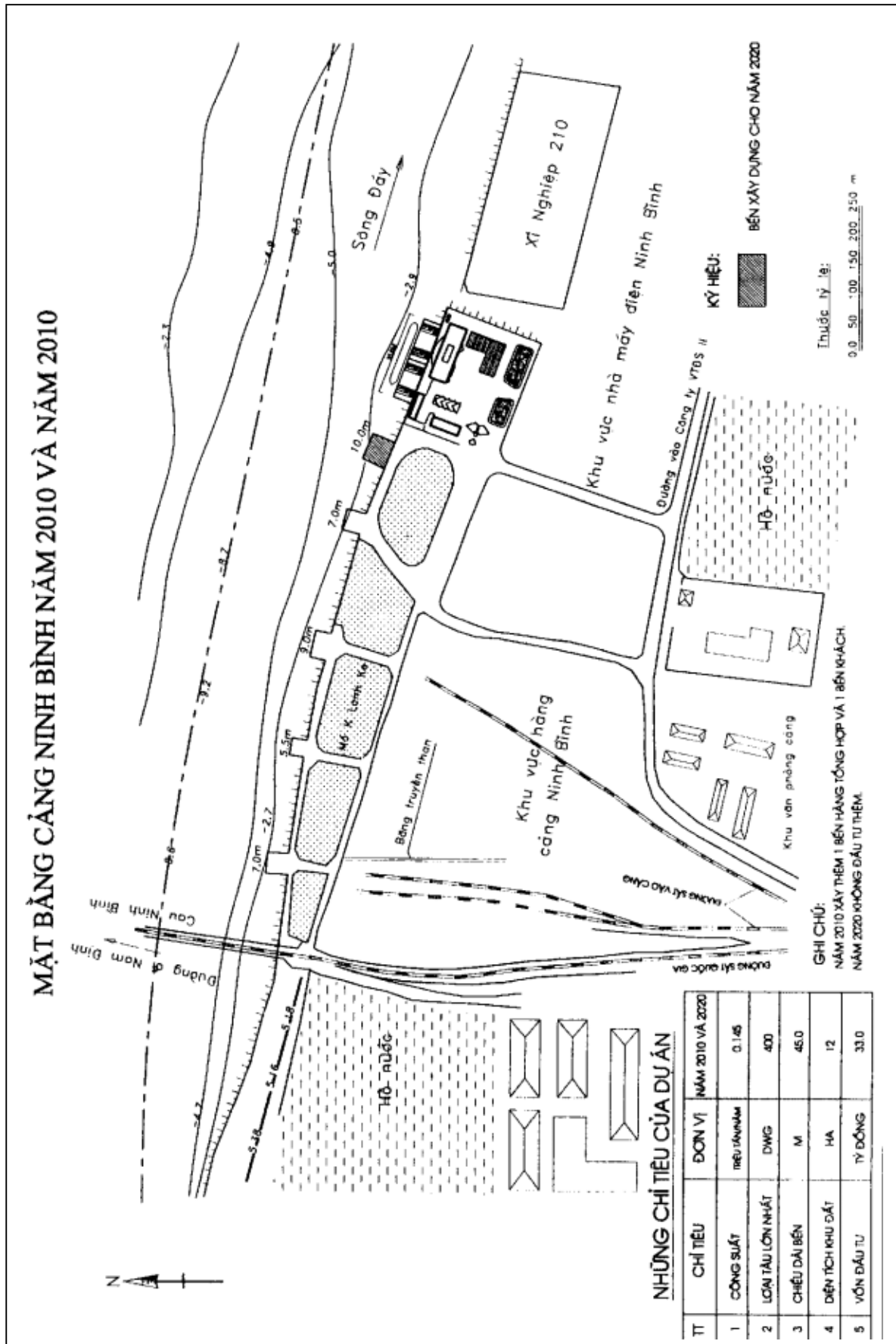
	Major Commodities & Flow Pattern
Loading	Cement in bag: 80 (cement plant - Port - Southern region) Clinker: 392 (cement plant - Port - Da Nang) Fertilizer: 28 (fertilizer plant - Port - RRD) Lime, Marble Stone: small quantity
Unloading	Coal: 404 (from Quang Ninh) Gypsum: 45 (Hai Phong - port - cement plant) Construction Material: 29 (from Phu Tho & Hoa Binh) Steal etc.: 12 (from Hai Phong) Molasses, Vegetable Oil, Salt, rice: small quantity

Note) Data: 2001

Source) Transportation and Unload Company of Inland Waterway under VIWA

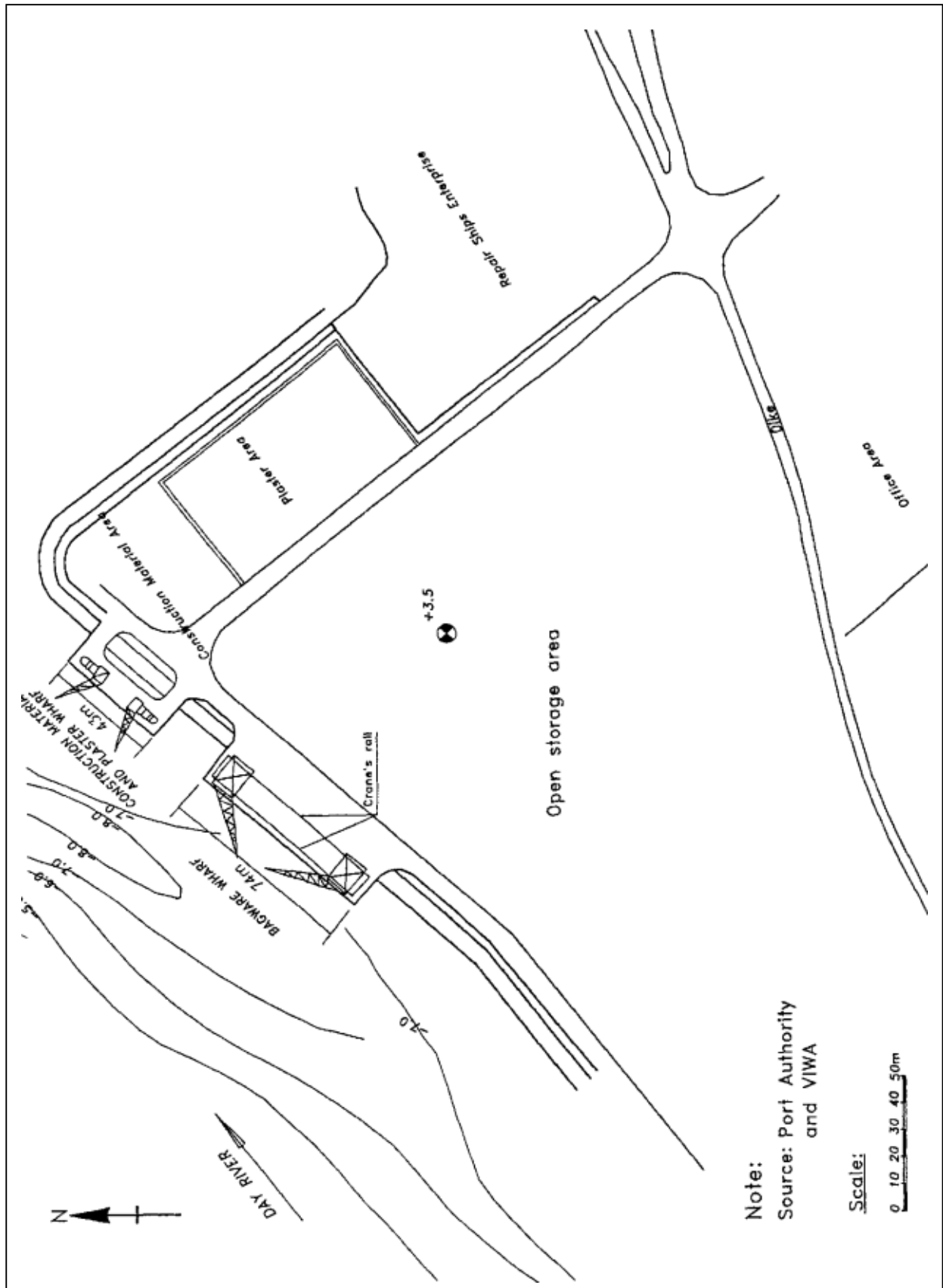






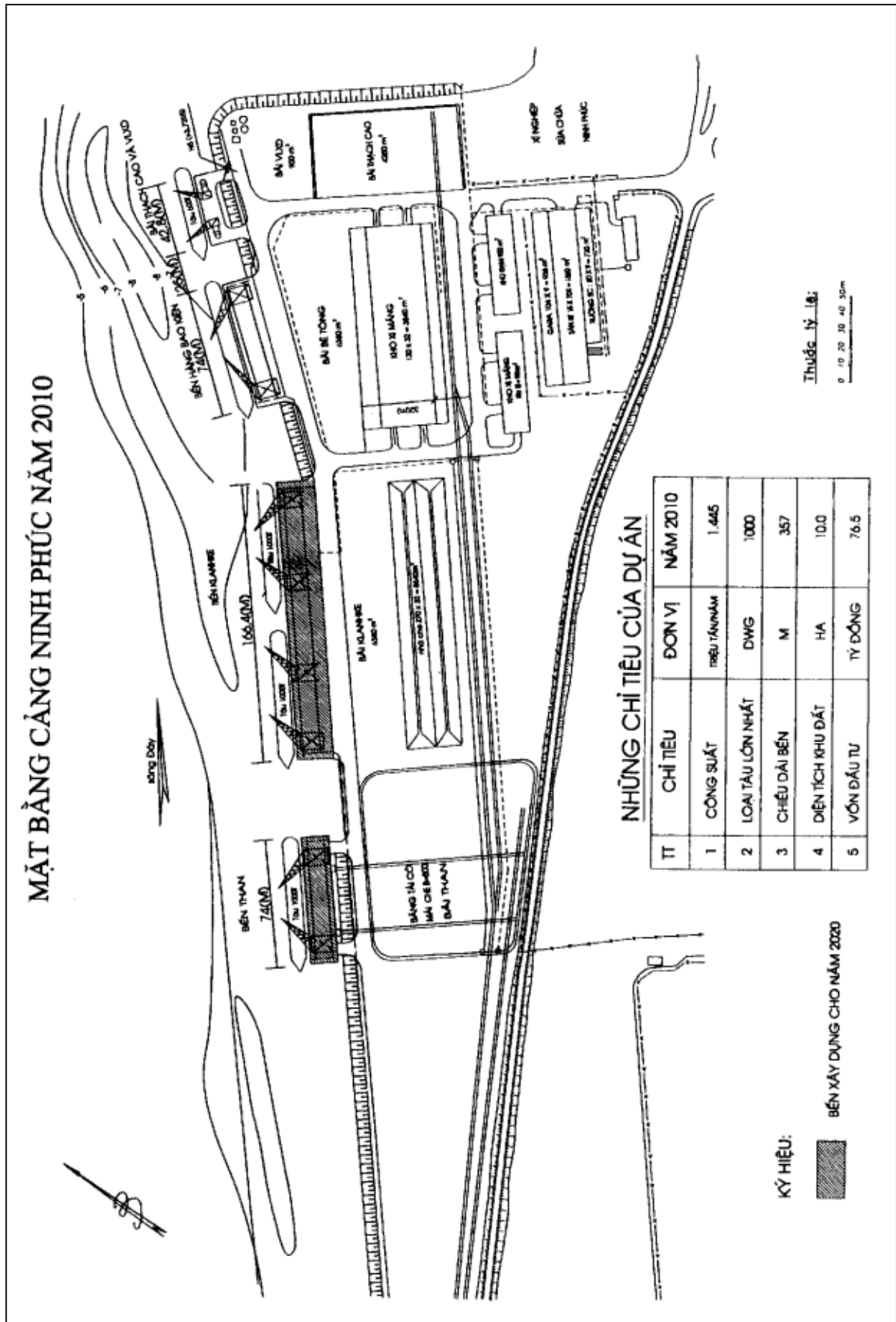
Source] M/P on Vietnam Waterway Transport Development up to 2020, Appendix 1, Nov. 2000, VIWA

**Figure 7.3.5 Master Plan of Ninh Binh Port for 2010**



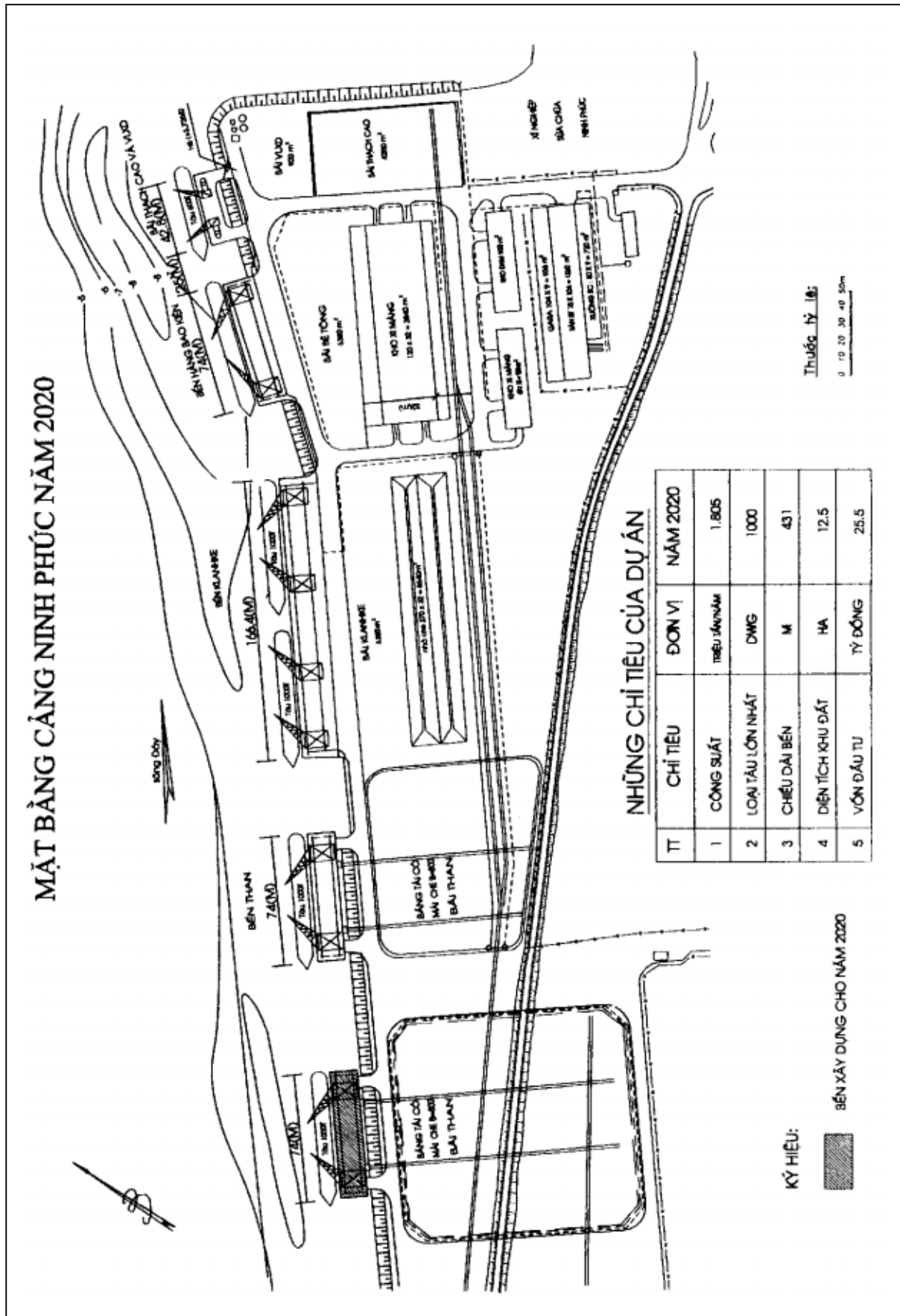
Source) Red River Waterways Project Vietnam, TA No. 2615 - VIE, Jan. 1998

**Figure 7.3.6 Layout of Ninh Phuc Port**



Source] M/P on Vietnam Waterway Transport Development up to 2020, Appendix 1, Nov. 2000, VIWA

**Figure 7.3.7 Master Plan of Ninh Phuc Port for 2010**



Source) M/P on Vietnam Waterway Transport Development up to 2020, Appendix 1, Nov. 2000, VIWA

**Figure 7.3.8 Master Plan of Ninh Phuc Port for 2020**

### 7.3.3 Nam Dinh Port

Nam Dinh Port is located on the right bank of Dao Nam Dinh River and just downstream of Nam Dinh Suspension Bridge. The main cargo recently is only construction material such as sand and gravel, since other cargoes are attracted to Ninh Binh & Ninh Phuc Ports. VIWA thinks that the port should be managed by local authority.

**Table 7.3.11 Outline of Nam Dinh Port**

Item	Description
Port Authority	Inland Waterway Port Authority zone II
Port Operator	Nam Dinh Port under NOWATRANCO
Storage Yard	0.5 ha
Warehouse	5,000 m <sup>2</sup>
Workshop	(unavailable)
Handling Equipment	Gantry Crane: 6, Crawler Crane: 2, Truck Crane: 3
Access to the Port	Road: 4km
Handling Charge	2002: (unavailable), 1998: 5,000VND/ton
Tonnage Dues	300VND/DWT (In: 150VND/DWT, Out: 150VND/DWT)

Source) Nam Dinh Port under NOWATRANCO

**Table 7.3.12 Berths of Nam Dinh Port**

Berth No.	Length	Width	Depth (Elevation)	Crown Elevation	Year Built
No.1 - No.4	300m	(-)	approx.-4m	(-)	(-)
Pier No.1	(-)	(-)	approx.-4m	(-)	(-)
Pier No.2	(-)	(-)	approx.-4m	(-)	(-)
Pier No.3	(-)	(-)	approx.-4m	(-)	(-)

Note) (-): Statistical data unavailable.

Elevation: shown in the National Elevation System (zero m = average water level in long period at the sea area near the Hon Dau island in Hai Phong city)

Source) Nam Dinh Port under NOWATRANCO

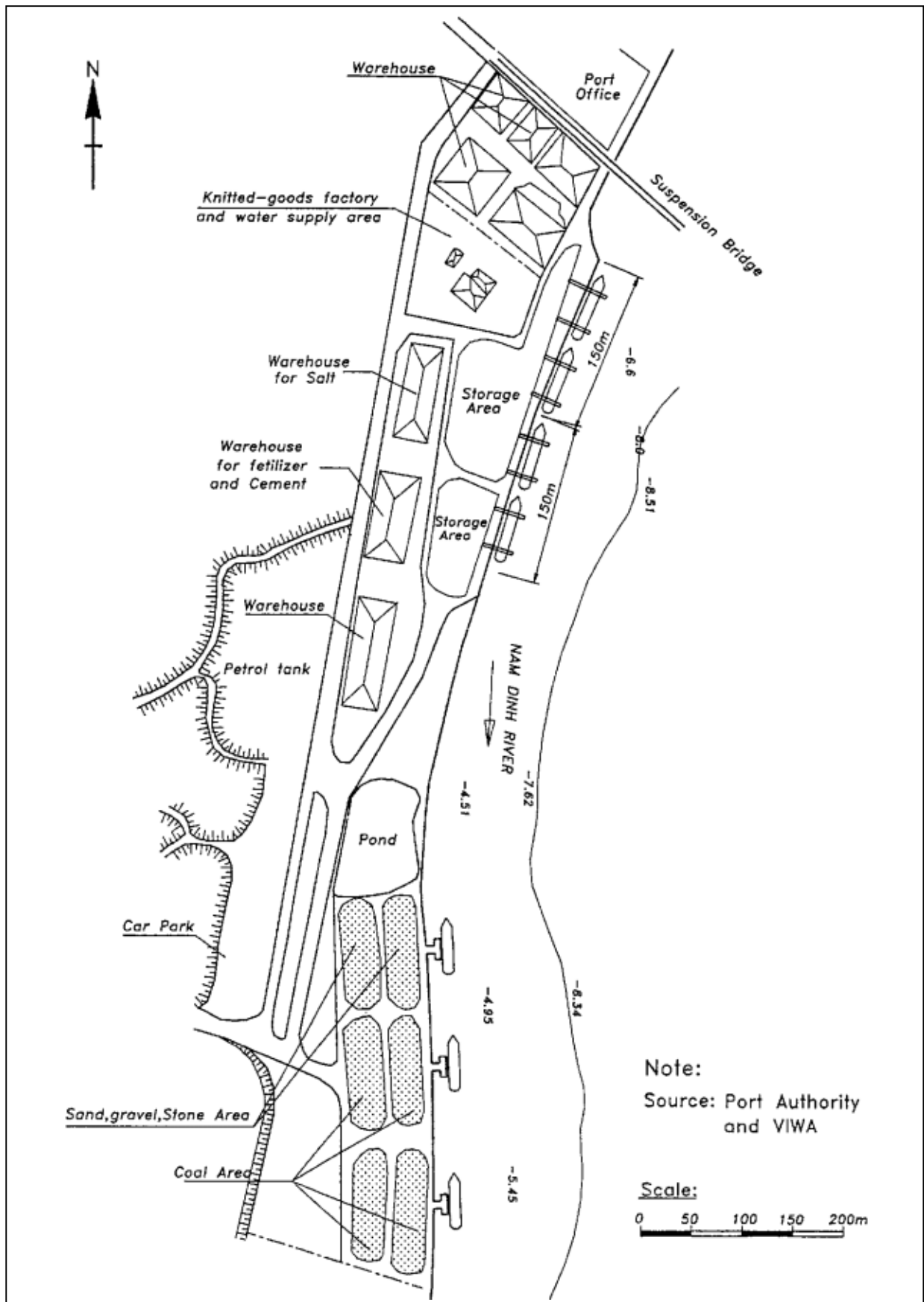
**Table 7.3.13 Cargo Throughput of Nam Dinh Port**

(Unit: 1,000 tons)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Throughput	(-)	(-)	(-)	(-)	130	84	71	51	76	99	130

Note) (-): Statistical data unavailable. Main cargoes are construction material and coal.

Source) Nam Dinh Port under NOWATRANCO



Source) Red River Waterways Project Vietnam, TA No. 2615 - VIE, Jan. 1998

**Figure 7.3.9 Layout of Nam Dinh Port**

## 7.4 Identified problems and issues

In general, major river ports managed by MOT in the Red River Delta do not make full use of their designed capacity except Ninh Binh & Ninh Phuc Ports. Cargo throughput of some ports such as Hanoi Port, Khuyen Luong Port and Viet Tri Port only reaches half of their designed capacity. It should be noted that black sand, which was exploited on site riverbed, is not included in their cargo throughput as far as vessels are not deployed as transport means.

The main reasons why these ports cannot make full use of their designed capacity can be summarized as follows:

### (1) Competition among major ports and private berths

Since different economic sectors participate in IWT after Doi Moi Policy was adopted, about 68% of vessel fleet in total DWT in the Northern region are said to be private vessels. Therefore, these private vessels can call at private berths taking account of service cost and quality of major ports and private berths.

### (2) Outdated and Inefficient handling equipment

Handling equipment such as quay crane, mobile crane and forklift is very old. For example, some cranes in Hanoi Port have been used for more than 30 years. In addition, there is a lot of equipment which is not dedicated for port but diverted from road transport means (at second-hand). Frequent breakdown or troubles make handling efficiency decline. Moreover, there is no handling equipment which can handle container box of 40ft nor 20ft.

### (3) Low mechanization

Mechanization of packed cargo handling in port area is still at a low level, since the unitization is not introduced. Human-wave tactics by porters in cargo handling are sometimes observed.

### (4) Insufficient and damaged port facilities

Some port facilities such as quay and fender system are damaged or lacking. The capacity of warehouse is insufficient. Many yards are in natural condition and there are few paved yards. There is no clear distinction between berth and yard for dirty and dusty bulk cargoes and for other clean cargoes. In Hanoi Port, there is no

enough space for future development.

(5) Poor access to hinterland

Some ports are poorly connected to the national transport network due to insufficient road access. It makes it difficult to access to hinterland.

(6) Shortage of investment fund

Above-mentioned outstanding problems are mainly due to the shortage of investment funds.