

## **Chapter 4**

# **ASSESSMENT OF CURRENT COASTAL SHIPPING**

## Chapter 4 ASSESSMENT OF CURRENT ROLE OF COASTAL SHIPPING

### 4.1 Policy Analysis on Coastal Shipping within the Context of the National Transport System

#### 4.1.1 Coastal Shipping in Vietnam and Other Countries

Coastal shipping plays a major role in the inland transport system of Vietnam, carrying about 37% of total ton km as shown in Table 4.1.1. Even higher figures can be found in other countries - for example 44% in Japan. The ratios of annual coastal shipping traffic to GDP and population in Vietnam are 0.17 ton km per US\$ and 49 ton km per capita respectively. Higher traffic per GDP is found in Philippines and Indonesia, but lower in Japan (where domestic shipping is in decline). On a per capita basis, Vietnamese coastal shipping is much smaller than all other countries, reflecting the low incomes of Vietnam.

Annual traffic carried per GRT of capacity is 34,000 ton km, which is lower than some other countries, suggesting that utilization in Vietnam could be increased by about 20%. The recorded accident rate in Vietnam is also generally higher than other countries (even though there is much under-reporting) suggesting that there could be scope for at least a 50% reduction in number of accidents.

Coastal shipping in Vietnam differs from other countries in having no liner service (whereas these are extensively developed in other countries), a strong government presence (other countries have almost entirely privately-owned shipping fleets), little use being made of specialized ships found elsewhere, and few foreign vessels being chartered (whereas this is a common way for foreign operators to acquire use of assets). The policy trend in other countries is increasingly towards encouraging of investment in coastal shipping through making foreign investment and participation easier, and towards deregulation of coastal shipping, in order to increase service standards, lower costs and raise safety standards. Subsidized passenger services are increasingly operated by operators who offer the lowest costs under competitively awarded contracts.

Table 4.1.2 introduces the Philippines' recent challenge to develop domestic shipping. It is a valuable contribution to the study from Engr. Samuel C. Custodio, Director of DOTC, Republic of the Philippines.

#### 4.1.2 National Transport Policy

In 1986, the Sixth Congress of the Communist Party of Vietnam called for Doi Moi – renovation – and a strategy to transform the economy from a centrally-planned system to one based on competitive markets. Since then, the Government has introduced wide-ranging market reforms in almost all sectors. These included rationalizing the system of prices, reducing the government budget deficit by progressively eliminating subsidies and overhauling the tax system, liberalizing domestic and foreign trade, extending land occupancy and development rights, rationalizing the legal framework, opening up the banking sector and attracting domestic and foreign investment. A competitive private sector now plays a key role in the economy.

Table 4.1.1  
COMPARISON OF ROLE OF COASTAL SHIPPING IN ASIA

|  | Vietnam<br>(1994)  | Japan<br>(1993) <sup>2</sup> | Philippines<br>(1990) <sup>3</sup> | Indonesia<br>(1990) <sup>4</sup> |
|--|--------------------|------------------------------|------------------------------------|----------------------------------|
| Inland Traffic (billion ton km)                      |                    |                              |                                    |                                  |
| Coastal Shipping                                     | 3.5 <sup>1</sup>   | 234.0                        | 15.6                               | 108.0                            |
| Road, Rail, Water                                    | 6.0                | 301.7                        | N/A                                | N/A                              |
| Total  | 9.5                | 535.7                        | N/A                                | N/A                              |
| Inland Traffic (million tons)                        |                    |                              |                                    |                                  |
| Coastal Shipping                                     | 2.7 <sup>1</sup>   | 528.8                        | 29.0                               | 72.0                             |
| Road, Rail, Water                                    | 71.0               | 5,901.7                      | N/A                                | N/A                              |
| Total  | 73.7               | 6,430.5                      | N/A                                | N/A                              |
| Coastal Shipping Capacity (thousand DWT)             | 170 <sup>1</sup>   | 10,000                       | 1,014                              | N/A                              |
| Coastal Shipping Capacity (thousand GRT)             | 102 <sup>1</sup>   | 5,400                        | 612                                | 2,600                            |
| Population (million)                                 | 72.0               | 125.0                        | 60.1                               | 179.4                            |
| GDP per capita (US\$)                                | 288.0              | 31,450                       | 830                                | 730                              |
| Coastal Shipping ton km/US\$ GDP                     | 0.17               | 0.06                         | 0.31                               | 0.82                             |
| Coastal Shipping ton km/capita                       | 49                 | 1,872                        | 260                                | 602                              |
| Ton km/GRT Shipping Capacity                         | 34,300             | 43,300                       | 25,500                             | 41,500                           |
| Average Annual Maritime Accidents                    | 147.0 <sup>5</sup> | 2,147.7                      | 224.0 <sup>5</sup>                 | 270.4 <sup>5</sup>               |
| Average Annual Dead or Missing                       | 21.0               | 261.8                        | 525.6                              | 273.6                            |
| Accidents per billion ton km                         | 42                 | 9                            | 14                                 | 3                                |
| (including accidents involving vessels over 100 GRT) | (8)                | N/A                          | (4)                                | (1)                              |
| Deaths per billion ton km                            | 6                  | 1                            | 34                                 | 3                                |

- NOTES: (1) 1995 estimate. Shipping capacity is roughly estimated assuming 19% of total commercial general cargo and tanker fleet (by DWT) is used in coastal shipping and ratio of GRT : DWT is 60%.
- (2) Excluding small vessels less than about 100 GRT. Including passenger ships with about 3% of total capacity. Total DWT only approximately estimated.
- (3) Estimated traffic carried by 683 vessels over 100 GRT used mainly for domestic coastal shipping including passenger services (which make up about 25% of capacity). Freight traffic carried on road vehicle ferries is excluded. GDP is 1993 estimate.
- (4) Estimated ton km assuming average of 1,500 km per trip. Fleet refers to Indonesian registered vessels over 100 GRT. Chartered foreign registered vessels also provide services included in the traffic figures. GDP is 1993 estimate.
- (5) But, involving ships over 100 tons, only 29 in Vietnam, 70 in Philippines and 135 in Indonesia.
- SOURCE: Vietnam (GSO and JICA Team survey), Japan (Annual Statistics), Philippines (JICA Master Plan Study, 1992), Indonesia (JICA Study on Sea Transport in Eastern Indonesia)

Table 4.1.2

**DEVELOPMENT OF DOMESTIC SHIPPING IN THE PHILIPPINES**

Deregulation and liberation policies in the Philippines improved the overall health of the inter-island shipping industry. Competition is in effect; services are improved; and more investment became apparent. Its history and deregulation policies are stated below:

**INSTITUTIONS AND POLICIES**

(a) History of Institutional Changes

Before the World War II, the shipping industry was regulated under the Public Service Commission created by the Public Services Act among other public services. In 1972, the Board of Transportation (BOT) replaced the Public Service Commission, and in 1985, the Maritime Industry Authority (MARINA) replaced the BOT to promote more efficiency in governments. During these years, the heavily regulated domestic shipping industry had been in stagnation.

(b) Policy Changes

The turning point was two maritime accidents of Dona Paz and Dona Marilyn which cost thousands of Filipinos lives. The Presidential Task Force on the Inter-Island Shipping Industry (PTFIISI) was created in 1989 to revive the industry. Two policies recommended by PTFIISI were safety and deregulation. The Department of Transportation and Communication (DOTC), also joined the effort in March 1992. In October, 1992, MARINA initiated deregulation policies for the domestic shipping industry. In June 1994, the industry became more open for new operators and investors, and then, implementing rules and regulations were set forth.

**REGULATIONS**

MARINA's policy covers three areas: entry into and exit out of the industry; passage and cargo rates; and vessel acquisition.

(a) Entry into and Exit out of the Industry

Since water transport is a public utility by law and court decisions, entry into and exit out of the industry are controlled. For the entry, proof of Filipino citizenship, proof serve public interests, and financial capability are required for a certificate of public convenience. Liberation policies are to prevent monopoly of a shipping route; shift of burden of proof on public interests to oppositors; preference of better and newer vessels; and more flexibility on rerouting, scheduling, and changes of vessels.

(b) Freight and Passage Rates

The liberalization policies on rates in May 1989 included abolishment of the ad valorem rates; deregulation of Second Class passage rates; reclassification of commodities. In 1990, deregulation went further to liberate price controls on commodities and transit rates; to abolish valuation surcharge; and to introduce the fork tariff system. In May 1992, fuel prices began to be adjusted to reflect market prices. In October 1992, the range of the fork tariff was increased. The passage and freight rates of all classes were liberated except on Third Class passage rates and cargo rates for non-containerized basic commodities to protect public interests and welfare.

(c) Vessel Acquisition

MARINA lifted the existing age and size restriction on vessel acquisition in November 1993, and offered soft loans for new vessel acquisition to help Filipino ship owners and operators.

In addition to these general reforms, the transport sector has seen extensive commercialization – and in many cases privatization – of state enterprises. Active encouragement has been given to cooperatively and privately owned transport services. Price reform and a generally competitive business environment, in conjunction with increased government spending on infrastructure, have helped raise levels of efficiency and quality, and perhaps lowered the real economic costs of transport. Even so, some shortcomings still remain.

The Ministry of Transport has not yet finalized its policy regarding these remaining problems. However in 1995 transport policy was outlined by the Minister in “Transport Development till the Year 2000 in order to meet the Changing Economy towards Industrialization and Modernization”. Based as it is on the ideas expressed in Doi Moi, it emphasizes the following themes.

- The long-term development of the country depends critically on an efficient transport system — one in which capital, labor, equipment and materials are used in the most economically productive way,
- development of transport infrastructure is a key to overall economic development,
- Vietnam’s geographical location offers favorable conditions for offering international transport services such as transit and transshipment,
- low investment in the transport system in the past has been an impediment to economic development

The vital role of the state in providing this infrastructure is spelled out for each mode. It is further recognized that the private sector will play a dominant role in providing transport services within many sub-sectors and that

- infrastructure needs must be based on economic and other scientific principles to avoid waste of resources,
- regulations and laws must be developed which encourage investment and allow the costs of infrastructure to be recovered from user charges,
- the key to achieving efficiency lies in the incentives associated with competitive markets, which reduce costs and improve standards to the benefit of transport users,
- although an increasing role for the private sector is anticipated, a role will remain for certain large state-owned transport enterprises in the shipping and other sub-sectors, but these must operate within a disciplined environment which promotes efficiency,
- in the short term, the majority of investment resources for transport infrastructure and certain operational assets such as ships are likely to come from foreign sources, although increasingly domestic sources will be used, and
- priority should be accorded to personnel development through training and retraining to keep pace with technological development.

These broad principles should be translated into detailed objectives for the transport sector and applied across subsectors.

Section 2.4.2 reveals some transport priorities of MOT, such as; 1) emphasizing roads rather than infrastructure investment in seaports; and 2) planning roads and networks on land while anticipating only ad-hoc developments in water transport.

It is possible for Vietnam to develop an attractive transport network that includes water transport, using the same transport planning methods used for land transport. For example, if the north-south trunk roads are improved and coastal waterways left in poor condition, increasing traffic will require many road vehicles which would increase pressure on the road system and increase transport costs even more. Only after comparison of alternative networks on land and water, would it be possible to evaluate additional north-south routes such as the Trans-Vietnam Expressway.

#### **4.1.3 Definition of Coastal Shipping Policy**

Government policy towards coastal shipping is not yet clear, not only because overall transport policy has not yet been finalized in detail, but also because there is not always a clear distinction between the three forms of water-based transport used in Vietnam:

- international shipping (by either coastal services to and from neighboring countries or by ocean-going routes),
- domestic sea-going, or coastal, shipping (which is the subject of this study), and
- inland waterway.

All three types of transport may use the same ports and coastal or inland waterways. The same vessel may perform more than one of these forms of transport either in succession or even simultaneously.

##### **(a) Infrastructure Development**

So far the government has given priority to developing its policy towards international shipping because of the important role this plays in promoting international trade. Accordingly plans have been made to develop the major ports listed in Table 4.1.3.

Table 4.1.3  
**LIST OF PORT AND WATERWAY PROJECTS  
 EXPECTED TO BE FUNDED BY ODA**

| Name of Project  | Total Investment Requirement (US\$ mil) | Estimated Implementation Duration |
|--|---|-----------------------------------|
| Cai Lan Port   | 123                                     | 1996 - 2000                       |
| Haiphong Port  | 47                                      | 1996 - 1998                       |
| Saigon Port  | 40                                      | 1996 - 1998                       |
| Danang Port  | 14                                      | 1996 - 2000                       |
| Qui Nhon Port  | 10                                      | 1996 - 2000                       |
| Lien Chieu - Dung Quat Port                                  | 300                                     | 1996 - 2000                       |
| Red River Water Transport Improvement                        | 60                                      | 1996 - 2000                       |
| Improvement of Mekong River Water Transport and Can Tho Port | 56                                      | 1996 - 2000                       |

Source: "Socio-economic Development and Investment Requirements for the Five Years 1996-2000", Government Report to the Consultative Group Meeting, 1995

It is anticipated that the existing main ports of Haiphong, Danang and Saigon will be modernized to be able to accept ships ranging from 10,000 to 20,000 DWT, while complementary ports at Cai Lan in the north, and others in the south will offer specialized services for ships up to about 50,000 DWT, including possibly transit services at Ben Dinh. Navigation channels are planned to be widened to meet the demand for larger ships equipped with modern navigation services, and shipyards able to build ships up to 10,000 DWT and repair ships up to 50,000 DWT are also planned to be built by 2010. Specialized ports are also planned at Cua Ong, Hon Gai, Hoc Ac (relocated oil facility), Van Phong and Nghi Son Bay (cement), Mui Ron or Vung Ang (iron ore), Thi Vai or Cam Ranh (Bauxite), and Dung Quat (sand and similar commodities). Additional local ports are anticipated to be needed for freight and passenger traffic. An extensive range of improvement of inland waterways is planned involving widening, deepening and lengthening of major channels, and equipping them with navigational aids. This would allow coastal shipping access to new inland centers.

One remarkable development in the maritime sector, as a result of economic reform, is the construction in the late 1980's of Ben Nghe, near HCMC. This port is now in direct competition with Saigon Port managed by VINALINES, with container cargo terminals for feeder ships within the South East Asian region. The government is now authorizing private companies to build port facilities at Thi Vai, also near HCMC.

## (b) Approach to Institutional Development

Achieving this planned development is anticipated to require measures which make improvements to institutional arrangements, supply of capital and use of technology. In coastal shipping the institutional measures would involve

- making a clear distinction between the government's administrative role and that of transport businesses which are given freedom to compete,
- separate more clearly the roles and activities of state and provincial governments in planning and managing infrastructure,
- where public sector organizations could perform more effectively than private ones, possibly in areas such as maintenance of waterway infrastructure, maritime safety regulation, international shipping operation and ship building (which require considerable amounts of capital), take steps such as guaranteeing foreign loans to set up suitable operating or administrative organizations,
- develop any necessary laws to enable infrastructure users to be charged for the services provided, and to define quality control standards for maritime transport works.

In general, application of new technology will be encouraged through setting higher quality standards and improving government administration of these. Higher standards of civil engineering work for ports and other facilities are considered important. Containerization and multimode transport are seen as priority areas to encourage the use of new technology.

## (c) Regulatory Reform

As part of the government's program of price reform, many controls on maritime transport charges have been abolished. Freight customers and transporters are given virtually complete freedom to negotiate charges and terms of carriage (except for certain foodstuffs, where the controls appear to be largely ineffective). However infrastructure charges for ports and waterways remain, reflecting the monopoly situation in these services. Most passenger fares are controlled by government (at local level).

Although general fuel subsidies were removed in 1987, taxation policy has not yet been developed as an effective means of regulating competition between modes. Consequently in road transport, taxes on fuel and vehicle ownership are not yet based on infrastructure cost recovery principles. In the maritime sector, infrastructure charges are also frequently not based on provision costs, and discriminate between types of operators. Because of these taxation deficiencies, optimum use of each mode cannot be expected, resulting in higher overall transport costs to the Vietnamese economy.

To establish a genuinely independent regulatory organization, the government has begun to separate, at least to some extent, VINAMARINE's operational and regulatory functions - most of the operational functions being assigned to a new organization



VINALINES which was established on 1 January 1996. An extensive range of new legislation has been introduced to support market reforms in maritime transport. However there is considerable uncertainty about government policy in this area, and much remains to be done through institutional development and implementing new regulations, to reduce uncertainty and encourage investment, as described in Chapter Three.

In theory, most of the many operating companies under VINALINES, providing shipping, port and other services, can operate with considerable autonomy. Like many other state operators, they have become more independent to procure vessels and serve coastal and sea routes in the transport of both domestic and international cargo. However a lack of transparent rules regarding access to international routes hinders the possible development of private competition (only three private Vietnamese companies have so far been given permission to operate on international routes).

With their own limited resources, the Vietnamese shipping companies, in their desire to be competitive, are now seeking joint venture agreements with foreign shipping companies in order to be more cost-efficient, offer a higher quality of service and be more responsive to changing needs of coastal shipping. So far the main effect of this has been that many operators are now offering profitable agency businesses to foreign shipping companies.

However there has been little equitisation or privatization of the VINALINES organizations and, in practice, they remain subject to strong state control, especially in terms of investment finance. As described in Chapter Three, these organizations dominate the supply of coastal shipping services and also monopolize key services such as cargo handling and administration at ports, resulting in low productivity and level of service.

Deregulation of the inland waterway sector has apparently led to a thriving private sector in the south where these operators have gained market share from the state operator through market competition. These waterways carry a varied range of commodities, often for private customers. Possibly less benefits from deregulation have accrued to the north of the country where the inland waterway business is mainly in the hands of the state and local government operators who serve mainly government customers, requiring movement of a limited range of bulk goods. Most private coastal shipping operators are also located in the south. The impact of deregulation on the coastal shipping industry may have been limited, not only by the high concentration of supply in VINALINES, but also by the relatively small size of most private ships (less than about 1,000 DWT).

In freight forwarding, competition has developed for foreign traffic but, as yet, there has been little interest in offering intermodal transport services for domestic traffic. One constraining factor, here as in many other areas of coastal shipping, is the continuing

dominance of customers in the public sector who may wish to continue to deal in traditional ways with traditional transport companies. The poorly developed trade patterns, found historically between north and south, where the greatest potential for intermodal services exists, is another reason for the lack of development of freight forwarders.

#### 4.1.4 Policy Issues in Coastal Shipping

Based on this review of coastal shipping policy, the following important issues can be identified. Each of these issues, which are often closely related with each other, needs to be taken into account when developing the master plan for coastal shipping.

##### (a) Establishing a "Level Playing Field" for the Maritime Transport Industry

The problems facing the Maritime Transport Industry have to be seen in the context of the general economic and business circumstances in Vietnam. Economic reforms are underway and this is creating new problems and situations for transport customers, businesses and government. Uncertainty has been created by reforms and, as in any market economy, it is now difficult to forecast demand for transport services. However an additional source of uncertainty is government policy itself; this is evolving rapidly to meet the needs of reform, and new laws and regulations are being continually developed. It is often difficult to know exactly what the business rules are, and this discourages business activity.

In the maritime sector, the lack of a clear government policy towards many aspects of coastal shipping is a major problem for the industry. This forces VINAMARINE and other agencies to interpret policy in ad-hoc ways and increases the danger of regulatory decisions being made which are inconsistent with the general policy directions of government. Particular areas in which uncertainty exists either now or in the near future include:

- the extent to which the government encourages foreign investment in the Vietnamese shipping fleet,
- conditions under which joint foreign/Vietnamese operators can provide domestic coastal shipping services freely,
- rules for Vietnamese shipping operators to engage in international shipping (which is so often closely related to domestic coastal shipping),
- the extent to which state-owned enterprises will remain in the maritime sector and subject to government support (especially operators responsible to VINALINES which tend to monopolize coastal shipping)
- future taxation rates for coastal shipping activities which could increase if uniform rates are introduced, and
- future policy towards import of small foreign vessels which could be built in Vietnam (but possibly at greater cost or with lower quality).

Some rules such as those giving Vietnamese operators preferential rates for port services and controlled rates for domestic rice shipments are inconsistent with market principles and will be unsustainable once competition in the maritime sector becomes more established. In the short term there is a risk that some shipping operators will cross-subsidize domestic operations from profits on international services, which reduces their competitive position on international routes. The longer term danger is that when distortions in port charges are removed, Vietnamese operators and their customers will be ill-prepared for the increases.

(b) Encouraging Foreign Participation and Investment

The rapid changes caused by economic reform are causing acute difficulties for existing management who have insufficient experience or expertise in the new ways of carrying out business. Like similar managers in other sectors, operators in government-owned enterprises have insufficient experience of marketing, providing customer service, financing investments in new vessels and other equipment, and accounting. In addition managers in maritime organizations have little or no experience of operating specialized vessels (container or semi-container, Ro-Ro and bulk ships), freight forwarding, or developing scheduled liner services.

The maritime fleet is old, obsolete and in extremely poor condition. Many vessels are completely unsuitable to modern operating methods. Operating and maintenance costs are high because of the low level of technology used and because no use is made of efficiently operated specialized vessels. Although the potential demand for capital is substantial, it is difficult to see how domestic capital alone can meet the needs of the coastal shipping industry.

There are a growing number of private operators, not all of which may have experience in the industry, who lack the capital base and proven record to secure credit on reasonable terms. The lack of shipping experience and access to finance are major constraints on the development of the coastal shipping industry which can be expected to rely increasingly on the private sector in future years to provide the necessary management and finance.

One possible approach is to encourage greater participation in coastal shipping by foreign shipping companies and investors. This would entail not only initiatives by government through clearer policy statements encouraging foreign participation (as suggested above) but also changes to laws and regulations which allowed foreign investments to be made more easily. Priority could be given to foreign participation which introduced new technology or management techniques.

(c) Reform of State Enterprises

As mentioned above, the lack of any clear plan to reorganize or privatize the numerous government-owned shipping operators and other organizations in the subsector, which currently dominate the business, is a major source of uncertainty in the maritime industry. The continuing concentration of supply of most coastal shipping vessel capacity within VINALINES also reduces the possibility for competition which would encourage the efficiency and level of service improvements required to develop coastal shipping.

Although most government enterprises are, in theory, financially autonomous, it is not clear what action will be taken if and when such enterprises become bankrupt. The possibility of government intervention through subsidies is a business risk that deters investment by other operators (both in the state and private sectors). Clear policies to reorganize the state sector plus encouragement of state operators in financial difficulties to take appropriate early actions such as disposal of assets, would reduce these uncertainties, encourage investment and minimize the risks of reductions in active fleet caused by bankruptcy.

(d) Weak Regulatory Institutions

Development of VINAMARINE from a shipping management body into a regulatory agency is still far from complete. Many key staff were lost from VINAMARINE when VINALINES was established. At present this organization does not have the human, technical, or financial resources required to perform its vital regulatory role: it is unable to enforce present safety standards, let alone take on new expected responsibilities in the near future (as expected from international agreements) which involve higher standards. Similar problems are found in VMS and other important regulatory agencies.

VINAMARINE still retains operational functions at several state-owned ports such as at Qang Ninh, Nghe Tinh, Danang, Quy Nhon and Nha Trang, plus control of the Vietnam Maritime Bank, which are inconsistent with VINAMARINE's important role as maritime transport regulator. It is by no means clear that the government intends to transfer such responsibilities in the future. Poor port services are a major obstacle to developing coastal shipping services, especially in the general cargo sector. The early transfer of responsibilities deserves high priority.

(e) Coordination between Government Agencies

Issues arise concerning coordination between state government agencies, especially VINAMARINE and the IWB over administering the sea-cum-river transport services that involve use of both coastal shipping and inland waterway facilities, and play such an important role in Vietnamese transport.

Effective administration of coastal shipping services requires a clear and logical division of responsibilities between VINAMARINE and IWB, and good coordination between these organizations both in planning and maintaining riverways and in enforcing regulatory rules for ships, ports and waterways.

Unfortunately current arrangements do not promote uniform regulatory standards and fail to supply adequate finance for provision of navigational aids and maintenance of riverways. This could reduce the expansion of coastal shipping services along many rivers, thus limiting the role of coastal shipping in linking regional industrial centers to the two major delta areas. In view of the coordination difficulties, consideration should be given to combining the two organizations.

(f) Responsibilities for port services

Utilization of coastal shipping vessels is constrained by the lack of even basic modern cargo handling equipment such as forklifts and pallets and the lack of competition among cargo handling organizations which have no experience of modern cargo handling methods. Poor lighting and navigational aids reduce available productive time of ships and increase costs and fleet requirements still further. Major improvements are needed if investment in modern, specialized vessels is to be attracted.

Currently two ports (Haiphong and Saigon) are under the state government organization VINALINES. A number of options can be identified when considering who should be responsible for these ports. If the ports are to remain in government ownership, responsibility could be given to:

- ship owners and operators such as VINALINES,
- a central government body such as a new specialized port agency, or
- the appropriate provincial governments.

Alternatively, the ports could be privatized or leased, either in whole or in part. In this case, appropriate safeguards could be made to ensure that all operators have access to the port facilities they need to maintain a high level of competitiveness in the shipping business. The period of any lease would have to take account of any investments required of the port operator.

Because of the poor standard of port services in Vietnam and the need to attract private capital and expertise into the sector, it would be beneficial to continue to encourage new port operators into the sector. Private operators have already demonstrated the ability to develop ports successfully and have contributed valuably to transport infrastructure, although coordination difficulties have arisen for port authorities which could cause safety problems. Even if these ports are not privatized, better management of existing ports could be achieved by introducing performance-related contracts for management, leading eventually perhaps to the awarding of management contracts by competitive tendering.

### **(g) Developing the Vietnamese Ship Building Industry**

In considering how best to supply the Vietnamese shipping operators with the ships that they require and to develop the industry generally, important issues have to be considered such as

- which are the most promising markets for Vietnamese ship yards to serve (both for new construction and for repair),
- what role, if any, is appropriate for the public sector to play in ship building and its support services, and
- how to establish suitable economic and policy conditions to encourage worthwhile investments in ship yards.

Because of the important role that shipping plays in the economy of the country and because of its favorable geographic situation, the government rightly gives high priority to developing this sector. The poor condition of much of the coastal shipping fleet suggests that the ship yards could play an important role in modernizing the coastal shipping industry.

## **4.2 Cost Competitiveness of Coastal Shipping as Compared to Other Transport Modes**

### **4.2.1 Cargo Transport**

Cargo is transported using five modes of transport: land, rail, air, inland waterway and coastal shipping. In 1994, the total cargo carried was 60.5 million tons. Cargo is mostly transported by trucks, which account for around 67.3 percent, railway 5.3 percent, inland waterway 25.7 percent and coastal shipping only around 1.7 percent.

The cost comparison of the different modes for cargo transport in Vietnam is based on the rates per ton-kilometer of cargo carried. Various studies have reported on the transport cost of different cargoes: National Transportation Sector Review (NTSR, 1992), and the Master Plan of Rehabilitation and Improvement of Railways in Vietnam (JICA, 1996). Further, transportation cost levels at present have been based on the shippers and shipping operators surveys of the study team. Following is a discussion of the transport characteristics that relate to the costs of each transport mode.

#### **(a) Coastal Shipping**

Shipping services in Vietnam comprise mainly international and transshipment. Domestic shipping has not been fully developed and this situation is reflected in the port traffic statistics. Cargo volumes of major coastal ports have increased in recent years based on MOT statistics, registering 10 million tons in 1993, mainly exports and imports, while domestic cargoes remained constant at around 2 million tons. Domestic cargoes transported by coastal shipping are limited, such as coal and cement and these goods are

likewise transported by rail. Considering that cement and coal comprise 40 percent of the overall cargo volume transported, however, coastal shipping may provide a more efficient form of transport than rail in terms of cost.

The Government Price Committee stipulated the cargo freight charges for coastal shipping but they have not been updated. At present, only the tariff for foodstuff is effective, i.e., 180,000 VND per ton for transporting foodstuff from the ports in HCM area to the ports in Haiphong area.

Since state-owned shipping operators could not disclose detailed financial statements, the Study Team analyzed financial viability of current coastal shipping in collaboration with a foreign operator as shown in Figure 4.2.1. In the analysis, we selected rice and coal haulages between the north and south as typical coastal shipping services. As a result, the break even freight rates, which can just cover a net voyage cost, range between US\$ 11.49 - 12.80 per ton or US\$ 0.0074 - 0.0084 per ton-km, respectively. It is to be noted that a net voyage cost does not cover any management costs on land.

At the same time, the Study Team has collected some actual coastal shipping rates for cargo for coastal routes as shown in Table 4.2.1

Figure 4.2.1

**FINANCIAL ANALYSIS OF CURRENT COASTAL SHIPPING**

**RICE HAULAGE from SAIGON Port to HAIPHONG Port**

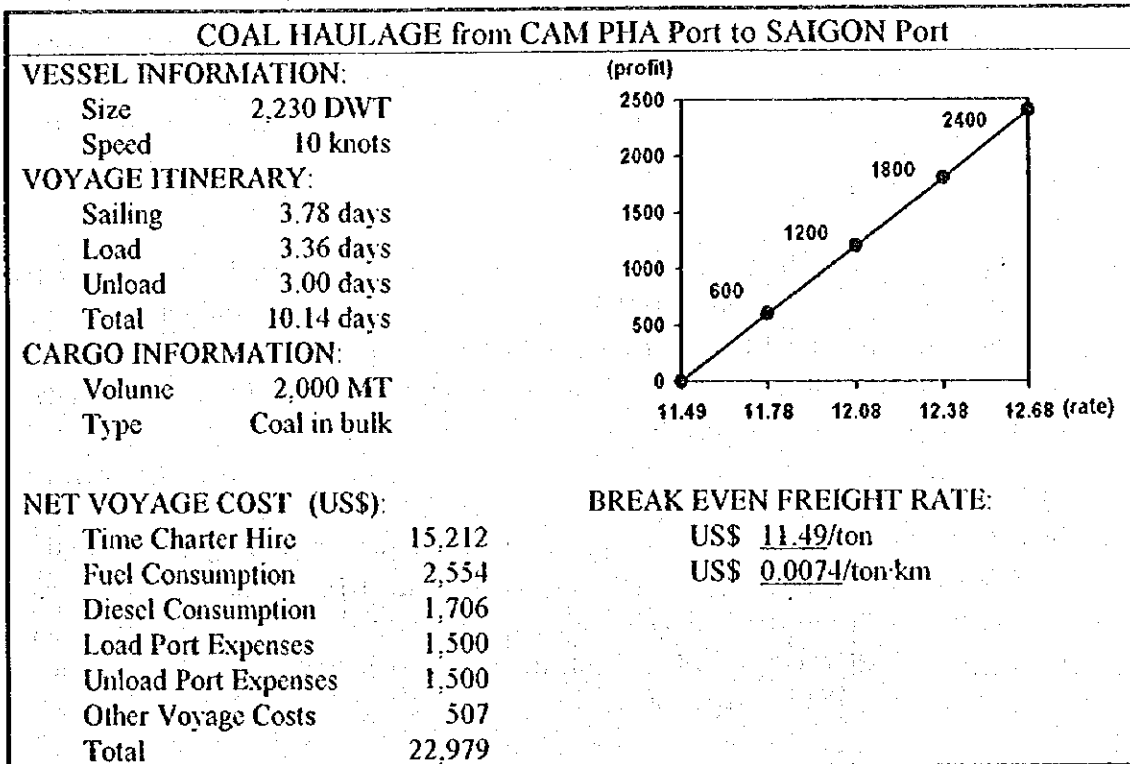
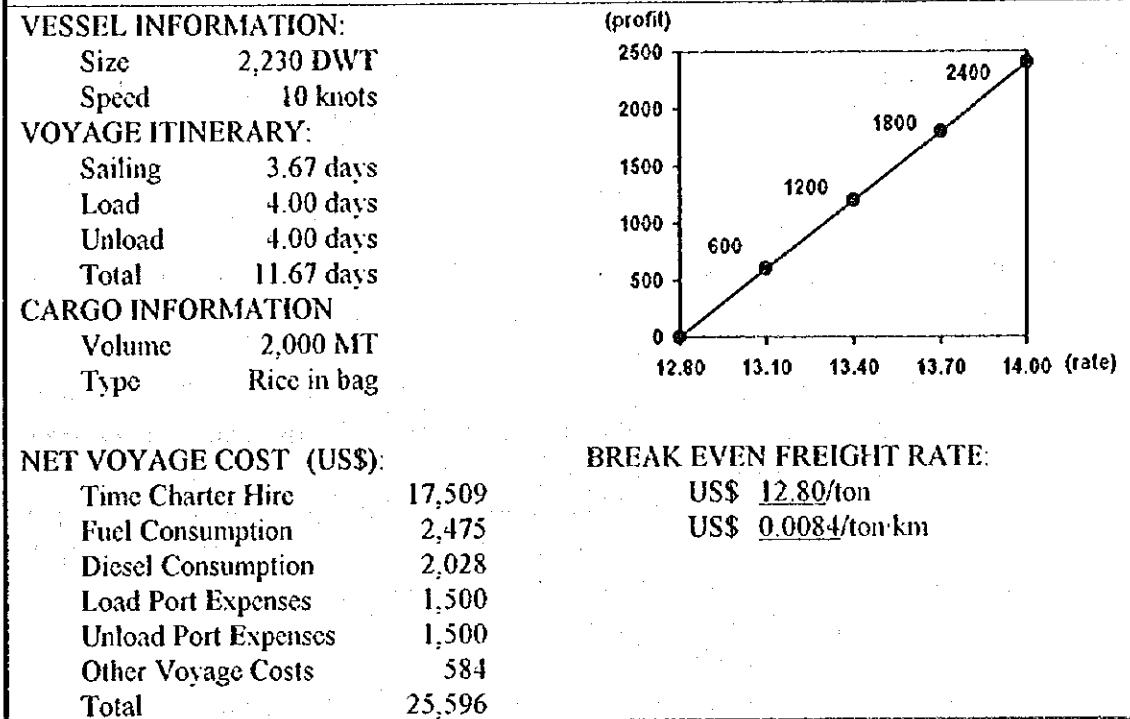




Table 4.2.1  
EXAMPLES OF ACTUAL COASTAL SHIPPING RATES

| Route                            | Distance (kms) | VND/ton | VND/ton-km |
|----------------------------------|----------------|---------|------------|
| Hanoi-Haiphong (inland waterway) | 110            | 50,000  | 454        |
| Haiphong - Danang                | 610            | 75,000  | 123        |
| Haiphong - Nha Trang             | 1,100          | 85,000  | 77         |
| Haiphong - Saigon                | 1,520          | 95,000  | 63         |

Source: JICA Study Team

The limited information presented above suggests the following implications for coastal shipping:

- The governmental tariff for foodstuff is higher than the Study Team's estimation and the actual rates. Under the valid governmental tariff, shippers and transport operators are allowed to negotiate the transport rates based on existing market conditions but these rates should not exceed the prescribed ones. When the Government asks shipping operators to transport rice from the South to the North in emergency, the rate to be applied may take account of the vessel size and the possibility of empty return voyages.
- Some actual rates are lower than the break even rate by the Study Team's estimation. The gap between them is theoretically an operator's deficit but operators may not perceive this, especially in calculating the cost for time charter of a vessel. State-owned operators enjoyed subsidies to procure vessels until the early 1990s and are therefore likely to underestimate vessel ownership costs.

#### (b) Inland Waterways

The Government Price Committee has stipulated the cargo freight charges for inland waterway transportation (effective July 15, 1995) but, same as coastal shipping, the rates are negotiable provided these rates do not exceed the prescribed rates. The rates are prescribed specifically for transportation service enterprises that are allocated funds from the state budget, for their operations.

##### 1) Cargo Tariff

Inland waterway tariff rates are charged according to the type of river channel reflecting the relative difficulty of navigation through each channel, related to the depth, clearance and width. For river type 2, the charge is equivalent to 1.5 km of river type 1; and for river type 3, 1 km is equivalent to 3 kms on river type 1. Cargo transport rates are also categorized according to types of cargo:

- Cargo 1 - various types of coal, soil, sand, gravel and bricks;
- Cargo 2 - tile, food in bag, oil, stone and termite killer, and
- Cargo 3 - fertilizer, insecticide, cement and salt.

Cargo consignment volumes transported using inland waterway differ but the maximum consignment size is around 1,000 tons for a minimum distance of 30 kms.

The tariff for inland waterway takes into account the following 1) distance; 2) commodity value and 3) type of river/ inland navigation channel through which these goods will be transported as shown in Table 4.2.2.

Table 4.2.2

### INLAND WATERWAY TRANSPORT CHARGES

| Item                         | River 1 | River 2 | River 3 |
|------------------------------|---------|---------|---------|
| Up to 30 kms. (VND/ton)      |         |         |         |
| Cargo 1                      | 19,700  | 19,700  | 19,700  |
| Cargo 2                      | 21,600  | 21,600  | 21,600  |
| Cargo 3                      | 23,900  | 23,900  | 23,900  |
| From 31 kms. up (VND/ton/km) |         | (x 1.5) | (x 3)   |
| Cargo 1                      | 135     | 202.50  | 405     |
| Cargo 2                      | 148     | 222     | 444     |
| Cargo 3                      | 162     | 243     | 486     |

Source: Government Price Committee, 1994

#### 2) Operator's Cost

For transport operators using inland waterway, the Inland Waterways Bureau (IWB) charges a tonnage fee, formality fee, pilot fee, river vessel support fee and fines while individual port operators levy cargo handling charge, storage fee and a berthing fee. It is assumed that these fees paid by transport operators will ultimately be passed on to shippers and consignees as part of their transport charges.

- Tonnage fee for every entrance and exit of vessel 150 VND per ton capacity
- Minimum pilotage (entry and exit) 100,000 VND (or US\$ 9.09).
- Waiting fee for pilot per hour 12,000 VND
- Formality fee (entry and exit) (depending on vessel tonnage) 5,000-40,000 VND

Cargo handling charges depending on cargo categories and handling procedures, are presented in Table 4.2.3. The handling procedure (a), whereby the cargo is unloaded from the vessel/barge and brought to the storage area, is charged the highest since it is a two-step process : ship-to-wharf and wharf-storage area (storage shed is located far from the wharf). The other cargo handling procedures (b) to (e) have relatively lower rates since they consist mainly of a single step in cargo transfer or the relatively smaller distance involved for transferring cargoes e.g. barge-to-barge.

Further, the handling rate per ton is based on the cargo type, i.e. cargoes belonging to higher cargo types are charged higher rates. (Refer to Table 4.2.4) Cargo type 7 is

charged the handling rate that is four times the rate charged for type 1 cargoes. The cargo handling tariff does not fully reflect the relative difficulty of handling cargoes according to each type and handling method.

Table 4.2.3

**CARGO HANDLING CHARGES OF THE FIVE PORTS  
UNDER THE MANAGEMENT OF IWB  
(in VND per ton)**

| Cargo Type | (a)<br>From ship, barge to storage, yard or v.v. | (b)<br>From ship, barge to truck trailer or v.v. | (c)<br>From barge to barge | (d)<br>From storage, yard to truck or v.v. | (e)<br>From storage, yard to trailer or v.v. |
|------------|--|--|----------------------------|--|--|
| 1          | 7,500  | 5,600  | 5,000                      | 4,300                                      | 5,800  |
| 2          | 9,000  | 6,700  | 6,000                      | 5,200                                      | 7,000  |
| 3          | 12,900   | 9,600  | 8,600                      | 7,400                                      | 10,000                                       |
| 4          | 15,200   | 11,400   | 10,100                     | 8,700                                      | 11,800                                       |
| 5          | 19,200   | 14,400   | 12,800                     | 11,050                                     | 14,900                                       |
| 6          | 25,300   | 18,900   | 16,900                     | 14,500                                     | 19,600                                       |
| 7          | 28,500   | 21,300   | 19,000                     | 16,300                                     | 22,000                                       |

Source: Government Price Committee, 1994

Table 4.2.4

**CARGO TYPES FOR INLAND WATERWAY TRANSPORT**

| Category | Commodities  |
|----------|--|
| 1        | Coal dust, sand, gravel, pebble.   |
| 2        | Old coal, lump coal with grain $\leq$ 35 mm, peat.   |
| 3        | Foodstuffs in bags as: rice, popcorn, sugar, bean, manioc, sweet potato, peanuts. Also include ores, broken bricks, clinker, bulk fertilizer and apatite, sulphur.   |
| 4        | Cargoes in paper and nylon bags as insecticide, chemicals, salt, cement, fertilizer, ore, coal > 35 mm.  |
| 5        | Steel and iron (roll, plates, pipe). Plates of cast iron, steel pipe, steel net, aluminum, iron and cargoes in wooden box (both close and open) with weight < 300 kg. Also include bags made from cloth, nylon, hemp with weight from 301 kg. to 500 kgs., sewn wood, bamboo trees and rots, twigs.  |
| 6        | Cargoes in tanks as asphalt, chemicals, calcium, carbide, petroleum and poultry products. Cargoes in tanks (close or open containers) with weight of 301 kg. to 2000 kgs. Also include general cargoes as house furniture, sport equipment, stationery, detergents, medical equipment, products from bamboo and husk and plastic products. |
| 7        | Cargoes in closed or open box (wooden or iron box) with weight over 200 kgs. (except containers, cargoes and cars of > 1.2 m long, > 3 m wide, > 2.5 m high and > 15 tons weight. Also include wood for building boats.  |

(c). Rail Transport

1) General Cargoes

The rail charges (VND/ton/km) for general cargo are categorized into five product groups. Unit rates for each cargo category decline as the transport distance increases. (Refer to Table 4.2.5.) In addition to being distance-related, the unit rates also depend on the commodity value. The lowest value commodities are grouped under Category 1 and the higher value goods are grouped in the higher categories. Table 4.2.6 lists the various commodities under each category:

Table 4.2.5

**UNIT RATES FOR RAIL TRANSPORT**  
(in VND per ton-km)

| Category | 1-200 km | 201-500 km | 501-900 km | 901- 1,400 km | 1,401 km or more |
|----------|----------|------------|------------|---------------|------------------|
| 1        | 190      | 175        | 165        | 155           | 150              |
| 2        | 215      | 195        | 180        | 170           | 165              |
| 3        | 238      | 215        | 205        | 135           | 190              |
| 4        | 257      | 235        | 220        | 210           | 205              |
| 5        | 282      | 255        | 240        | 230           | 225              |

Source: Master Plan on Rehabilitation and Improvement of Railway in Vietnam (1996, JICA)

Table 4.2.6

**CARGO CATEGORIES FOR RAIL TRANSPORT**

| Category | Commodities   |
|----------|---|
| 1        | Coal, mining ores, apatite, soil/stone, bricks, ice/water and paper/wood chips, etc.  |
| 2        | Rice, rice bran, maize, packaged foodstuffs, sugar/sugar cane, vegetables, cotton/linen/other fibres, gravel/shaped stone/plaster, logs, roof tiles/tiles, petrol/kerosene, vegetable oils, asphalt, rubber, metal construction materials and chemicals, etc. |
| 3        | Salt, fertilizer, cement, machinery, tyres/tubes, agrochemicals and timber etc.   |
| 4        | High class foodstuffs (ham and cheese, etc.), alcoholic drinks, coffee, cigarettes, silk, fur, watches, cameras, television and works of art, etc.  |
| 5        | Foreign fruits, flowers, foreign cigarettes/alcoholic drinks, crystal glass, gold, silver, jewelry, high class clothing, cosmetics, birds/goldfish, money/cheques and explosives, etc.  |

Source: Master Plan on Rehabilitation and improvement of Railway in Vietnam (1996, JICA)

From the above cargo classification, the lower cargo categories, Nos. 1 to 2 can be considered "basic" commodities. There was no indication of "shut-outs" of certain cargoes particularly during peak months as a result of competition. This may indicate the situation that rail transport is not an attractive transport mode for shippers or that the other transport modes offer sufficient capacity.

2) Wagon-Loaded Cargoes

Wagon-loaded cargoes have specific rates based on cargo category and special unit rates for short-distance transport of up to 30 km. and 100 kms.

Table 4.2.7

**UNIT RATES FOR WAGON-LOADED CARGOES**  
(in VND per ton - km)

| Category | 1-200 km | 201-500 km | 501-900 km | 901- 1,400 km | 1,401 km or more |
|----------|----------|------------|------------|---------------|------------------|
| 1        | 176.4    | 150        | 144        | 136           | 135.6            |
| 2        | 202      | 169        | 156        | 152.4         | 150              |
| 3        | 216      | 195        | 176.4      | 172.3         | 170.4            |
| 4        | 234      | 200.4      | 190.3      | 186           | 183.6            |
| 5        | 256.8    | 220.8      | 21.2       | 206.4         | 204              |

Source: Master Plan on Rehabilitation and improvement of Railway in Vietnam (1996, JICA)

Table 4.2.8

**UNIT RATES FOR SHORT DISTANCE WAGON-LOADED CARGOES**

| Category | Up to 30 km. (VND/ ton) | 31-100 km (VND/ton-km). |
|----------|-------------------------|-------------------------|
| 1        | 7,200                   | 148.8                   |
| 2        | 7,800                   | 163.2                   |
| 3        | 8,520                   | 186.0                   |
| 4        | 9,360                   | 200.5                   |
| 5        | 9,960                   | 223.2                   |

Source: Master Plan on Rehabilitation and improvement of Railway in Vietnam (1996, JICA)

The rail transport charges for goods that are loaded on a wagon for distance 31-100 kms. are lower by 13-16 percent (refer to Table 4.2.8) compared to unit rates for longer distance of 31-200 kms shown in Table 4.2.7. Further, for much shorter distance of up to 30 kms., unit rates for wagon loaded goods are 45-60 % higher than unit rates exceeding 30 kms. up to 100 kms. This reflects the situation whereby fixed costs of rail transport should be adequately covered by the rate charges. Thus for transport distance of up to 30 kms. flat rates are charged. In addition, special rate provisions for rail tariff are imposed such as:

- a 10% surcharge for special packed items;
- a surcharge of 200 VND/ton/km. is imposed on goods transported on the loss-making routes;
- a 30% reduction on standard rail charges for stone and gravel used in road repairs;

(c). Truck Transport

There were around 96,940 trucks registered in the country in 1993 including 40,499 trucks registered in the North. TESI's findings on the structure of this industry are as follows:

- only 16% of the trucks are privately owned and the rest are owned by the central government (35%) and provincial government (39%) although private ownership has increased since 1991; and
- a majority of the trucks were in the 5-7 ton category and only 5-10% have load capacity greater than 7 tons. NTSR established truck loads of 4.2 tons (empty trucks included) and 6.7 tons (empty trucks excluded).

The current rates for trucking for the Hanoi - Haiphong route (one way) is 120,000 - 150,000 VND/ton for general cargo. If the shipper has a "backload" the trucking operator charges on the average 180,000 VND/ton (both ways). In effect, the trucking charge for the backload cargo amounts to only 30,000-60,000 VND/ton. For breakbulk cargoes and containers, the current trucking charge from Hanoi to Ho Chi Minh City is given below:

|                     |             |             |
|---------------------|-------------|-------------|
| 4 tons (breakbulk)  | 600-1000    | US\$/ truck |
| 10 tons (breakbulk) | 800-1,500   | US\$/ truck |
| 20-ft. container    | 1,500-2,000 | US\$        |
| 40-ft. container    | 1,800-2,200 | US\$        |

The rates for container transport includes both the cost of trucks and container rental. Shippers prefer their cargoes to be loaded in containers to prevent pilferage particularly during night time. It is noted that an ordinary truck is used for transporting containers in most cases. Travel time between Hanoi and Ho Chi Minh City takes 5 to 6 days and there is no trucking operation at night. One problem encountered by the trucking industry is the weight limitation on some bridges.

The following table gives a detailed schedule of charges, in VND, for transporting containers from Ho Chi Minh city to various destinations:

Table 4.2.9

## TRUCKING CHARGES FOR CONTAINER TRANSPORT

| Destination   | Distance | 20'        | VND/ton- | 40'        | VND/ton- | Hrs./days   |
|---------------|----------|------------|----------|------------|----------|-------------|
|               |          | (in VND)   | km.      | (in VND)   | km       | Travel time |
| Bien Hoa      | 40       | 600,000    | 833      | 900,000    | 937.5    | 1.5         |
| My Tho        | 80       | 1,000,000  | 694.4    | 1,800,000  | 937.5    | 3.0         |
| Vung Tau      | 120      | 1,100,000  | 509.2    | 1,800,000  | 625.0    | 3.0         |
| Can Tho       | 200      | 2,800,000  | 777.8    | 3,500,000  | 729.0    | 1.0         |
| Phnompenh     | 300      | -          | -        | -          | -        | -           |
| Dalat         | 300      | 4,500,000  | 836.1    | 6,500,000  | 902.9    | 1.0         |
| Nha Trang     | 450      | 4,800,000  | 592.8    | 6,800,000  | 629.6    | 15.0        |
| Qui Nhon      | 600      | 5,500,000  | 509.28   | 7,500,000  | 520.8    | 20.0        |
| Buon Ma Thuot | 600      | 5,500,000  | 510.1    | 7,500,000  | 520.8    | 20.0        |
| Play Cu       | 700      | 6,000,000  | 476.2    | 8,000,000  | 475.8    | 1.0         |
| Danang        | 1000     | 7,000,000  | 388.9    | 9,500,000  | 395.8    | 1.5         |
| Hanoi         | 1700     | 14,000,000 | 457.5    | 20,000,000 | 490.0    | 3.0         |
| Haiphong      | 1800     | 15,000,000 | 462.4    | 21,000,000 | 486.3    | 3.5         |

Source: JICA Study Team, 1996.

1/ 20-ft. container is assumed to have maximum load of 18 tons and 24 tons for 40-ft. container.

The above trucking rates for container transport indicate decreasing rates for longer distances both for the transport of 20-ft. and 40-ft. containers. However, for short distances of up to 120 kms. the decrease in rates differs between 20-ft. and 40-ft. containers - a 50% increase in transport distance results in only a 27% decrease in the unit rate per ton-km. for 20-ft. compared to 33% decrease in rate per ton-km. for 40-ft. container. Thus, it is more economical to transport large consignment which can utilize 40-ft. rather than 20-ft. containers.

For medium distance hauling, i.e. from 200 km. to 600 kms., the rate per ton-km. for 40-ft. container is higher than the rate per ton-km. for 20-ft. container by a percentage difference of 2-7%, depending on the destination. For long distance hauling, transport distance exceeding 600 kms., the rates per ton-km. for 40-ft. containers are higher by 5-7% than the rates for 20-ft. containers, depending on the destination. It is noted that fluctuations in hauling rates happen due to seasonal demand, fuel increases and other related factors.

#### (d) Air Transport

There are 17 airports, excluding military airports, and three are considered to be international airports: Hanoi International Airport (Noi Bai), Danang International Airport and Ho Chi Minh International Airport (Tan Son Nhat). Four other airports have a fixed schedule of domestic flights: Haiphong, Nha Trang, Buon Me Thuot and Quot.

Air freight for both domestic and international rates is considered minimal and is mainly mail cargo. Domestic commodities carried are predominantly fresh fruit and personal effects. Production of high value commodities is still limited in Vietnam so there are few commodities that can afford high airfreight charges. In fact, air cargo was only 1,400 tons from Hanoi and 2,000 tons from Ho Chi Minh City in 1993. The government's target for air cargo transport for the year 2010 is 3,000 tons from Hanoi and 7,600 tons from Ho Chi Minh City and this already includes international cargo. These volumes are negligible compared to national cargo demand volumes.

Table 4.2.10  
**VOLUME OF AIRFREIGHT 1990-1993**  
('000 Tons)

| Year | Domestic | Foreign | Total |
|------|----------|---------|-------|
| 1990 | 2.5      | 1.5     | 4.0   |
| 1991 | 0.2      | 5.8     | 6.0   |
| 1992 | 4.0      | 6.0     | 10.0  |
| 1993 | 5.4      | 6.6     | 12.0  |

Source: General Statistical Office, 1994

#### 4.2.2 Passenger Transport

The passengers have a choice of mode: rail, road or air transportation. It was reported in most transport studies that the major modes preferred by travelers and commuters are buses and automobiles. Inland waterway is likewise used but the network is not considered competitive with other transport modes. The share of rail transport in terms of passenger traffic volumes is about 4.6 percent and for air traffic is even smaller (only 0.5 percent).

The total volume of trips made by travelers and commuters in Vietnam is estimated at 191 million trips and this excludes the intra-provincial trips in 1994. This represents 2.7 trips per person in a year.

##### (a) Bus Transport

Around 45,760 buses are registered in Vietnam as of the recent survey (1993). Of this number, 38,580 buses are used as public transport, of which half are mini-buses and tricycles. More than 80% of the bus companies are private as a result of the rapid progress of privatization reforms instituted by the Government but most of these are small. About 45% of the bus fleet is more than ten years old. The bus fare generally costs 70 to 100 VND per km-person, and it can be lower than 70 VND per km-person on the competitive routes. One problem of the industry is that few operators would want to serve the remote areas due to the very low passenger revenues set by government.



Bus transport has been generally preferred to other modes by the Vietnamese for intra-provincial trips. The current fare levels are quite competitive and services are provided mainly by private bus operators. The recent fare levels are presented below:

Table 4.2.11  
BUS FARE LEVELS, 1996

|  | Distance (kms) | Price in VND   | VND/passenger-km |
|--|----------------|----------------|------------------|
| Hanoi - Thai Nguyen<br>(State Company) | 80             | 8,800 - 11,000 | 110 - 137.50     |
| Hanoi - Lang Son<br>(Private)          | 154            | 50,000         | 324.70           |
| Hanoi - Haiphong                       | 110            | 12,000         | 109              |

Source: JICA Study Team, 1996

The passenger fare for rail is 16,000 VND for the Hanoi - Haiphong route or 150.90 VND per passenger-km which is higher than the bus fare of around 110-120 VND passenger-km. by more than 30%. This partly explains why passengers preferred bus services, in addition to convenience, over rail passenger services.

#### (b) Rail Transport

Passenger tariffs are set by the VNR subject to government approval. Student fares are discounted and these are compensated by the government. Passenger tariffs differ according to the type of train. The passenger rate for a place in a sleeping car ranges from 175 to 200 VND per km., 170 per km. for a soft seat and 90-130 VND per km. for a hard seat. The baggage rate is 120 VND for 100 kg. per km. and in addition, an insurance certificate of 100 VND must also be purchased and the amount of US\$ 10 is sometimes charged for stop-overs.

Rail passengers fares are based mainly on travel distance multiplied by the unit fare plus an insurance premium. The unit fare decreases as the travel distance increases. Included in the passenger fare is the fee for the express charge and sleeping berth charge for each type of train. There is a passenger fare table provided at each station by destination and train type. This system does not allow convenient purchasing of tickets for passengers who would be traveling in more than one train; and in most cases, passengers have to purchase new tickets each time they change class or train.

Table 4.2.12 presents the passenger fares from Hanoi to various cities while Table 4.2.13 shows the fares according to class or train types. First class berth and special berth are charged 70% higher than the standard seat. Foreigners are charged three times the fare for local passengers.

Table 4.2.12

**FARE TABLE FOR S1 TYPE TRAINS, EFFECTIVE APRIL 1994**  
(in '000 VND)

| Destination | Seat     |      |      | Compartment (6 berths) |        |       | Compartment (6 berths, air-conditioned) |        |       | Compartment (2 berths) |
|-------------|----------|------|------|------------------------|--------|-------|---|--------|-------|------------------------|
|             | 4 Seater | Soft | Hard | Lower                  | Middle | Upper | Lower                                   | Middle | Upper |                        |
| Hue         | 193      | 116  | 108  | 162                    | 149    | 132   | 202                                     | 180    | 158   | 199                    |
| Danang      | 222      | 134  | 124  | 186                    | 172    | 151   | 233                                     | 207    | 182   | 229                    |
| Dieu Tri    | 307      | 185  | 171  | 258                    | 238    | 209   | 322                                     | 287    | 251   | 317                    |
| Nha Trang   | 403      | 243  | 225  | 338                    | 312    | 275   | 423                                     | 376    | 330   | 416                    |
| Saigon      | 483      | 292  | 269  | 406                    | 375    | 330   | 508                                     | 452    | 396   | 499                    |

Notes 1/ Child fares for 5-10 year olds are half of the adult fares.

2/ Fares for foreigners are 3 times higher than those given in the table.

Table 4.2.13

**PASSENGER FARE TABLE BY TRAIN TYPE, 1994**  
(in VND/km.)

| Seating Class/Train Type | S7/8 and 9/10 | CM5/6 | S3/4 |
|--------------------------|---------------|-------|------|
| Standard Seat            | 132           | -     | -    |
| First Class Seat         | 143           | 155   | 169  |
| Standard Berth (Upper)   | 150           | 168   | 191  |
| Standard Berth (Middle)  | 174           | 191   | 217  |
| Standard Berth (Lower)   | 200           | 215   | 235  |
| First Class Berth        | 230           | 250   | -    |
| Special Berth            | 230           | 270   | -    |

Source: Masterplan on Rehabilitation and Improvement of Railway in Vietnam (JICA, 1996)

The travel time of express passenger trains from Hanoi to Ho Chi Minh City takes around 36 to 45 hours. It is planned that frequent services will be provided in the priority sections to reduce waiting time and inconvenience to both domestic and foreign commuters. There is a preference for this mode of transport for long distance trips by Vietnamese as compared to air transport due to the obvious reasons of cheaper fare and the greater amount of luggage that can be carried.

(c) Air Transport

At present, air transport accounts for less than 0.2 % of land transport trips and it carried only 0.25 million passenger trips in 1993. However, it accounts for around 30% of the long-distance trips between Hanoi and Ho Chi Minh since there is a limited number of

long distance trips for passengers. This should not give an impression that aviation is competitive with land transport since air services are mainly used by the government and business employees (52 percent of the travelers are on official travel). Air fares are very expensive compared to the average income of Vietnamese and thus only high income businessmen can afford the cost of air travel. Time savings was the main reason given by air passengers for taking this mode.

Only Vietnam Airlines operates domestically. With a low density of air traffic within the country at present, there may not be a need for deregulating the industry. It should be noted that the seemingly low potential domestic air traffic demand is a temporary situation and once the economy grows, this would result in a larger air passenger market. At present, the passenger capacity of domestic air routes is restricted and this may be explained by the fact that only 10% of passengers are foreigners who pay in US\$ while the remaining 90% are Vietnamese who pay in VND. Since Vietnam Airlines is operating a fuel inefficient aircraft, it needs more foreign exchange revenues to pay for its fuel imports. The Government has thus restricted the frequency to minimize its operating losses. As long as the present aircraft is utilized, domestic operations will remain costly and may only have break-even operations. US\$ fares are based on standard international tariffs for similar distances, while VND fares are adjusted according to Vietnamese income levels as shown below:

Table 4.2.14

**DOMESTIC ONE-WAY FARES**

| Origin-Destination | US\$ Fare | VND     | US\$ Equiv. | % of US Fare |
|--------------------|-----------|---------|-------------|--------------|
| Hanoi - HCM        | 165       | 750,000 | 68          | 41%          |
| - Danang           | 90        | 400,000 | 36          | 40%          |
| - Nha Trang        | 130       | 600,000 | 54          | 42%          |
| HCM City - Hanoi   | 165       | 750,000 | 68          | 41%          |
| - Danang           | 90        | 400,000 | 36          | 40%          |
| - Haiphong         | 165       | 800,000 | 73          | 44%          |
| - Nha Trang        | 60        | 200,000 | 18          | 30%          |

Source: Vietnam Airlines, 1996

**(d) Sea Transport**

Sea transport in Vietnam provides passengers with limited shipping services only on some short-distance provincial routes, remote island routes and tourism routes. The Inland Waterways Bureau is responsible for such shipping services. No coastal shipping service is under the jurisdiction of VINAMARINE.

The Study conducted passenger shipping surveys on selected routes in Haiphong and Quang Ninh area and HCMC and Vung Tau area. The results show that the passenger fares are higher than bus fares, and services are mainly provided by private operators.

The fares are generally within the range of around 300 VND per passenger-km in Haiphong and Quang Ninh area while the biggest problem which passengers perceive is doubtful seaworthiness. On the other hand, on the HCMC - Vung Tau route, the passenger fare is relatively high as a result of serving foreign passengers.

#### 4.2.3 Evaluation of Competitiveness of the Different Transport Modes

##### (a) Cargo Transport

Coastal shipping can offer attractive costs and level of service for

- many high volume bulk cargo shipments, and
- general cargo movements over long distances, especially if they avoid transshipment or long hauls by secondary transport such as inland waterways and roads.

Over long distances of about 600 km, coastal shipping offers substantial cost savings as shown in Table 4.2.15. In particular:

- for a typical medium distance route, from Haiphong to Danang, coastal shipping has the lowest transport distance of only 610 kms compared to 800 kms for trucking and 893 kms for rail transport. The overall coastal shipping rate per ton is equivalent to only 50-54% of the trucking rate and 68-72% of the rail transport rate,
- on the long distance route Hanoi-Ho Chi Minh City, coastal shipping still has the lowest overall transport cost, only 24% of the trucking rate and 52-56% of the rail transport rate.

Thus, coastal shipping in combination with other transport modes such as inland waterway and trucking for inland movement has the lowest overall transport charges for many medium to long distances. Despite the need for transshipment (whose costs are included in the above comparison), coastal shipping is likely to be preferred by many shippers with large cargo volumes or who use containers. If the consignment volume is made up of smaller transport volumes destined to different areas, road transport is likely to be preferred.

Table 4.2.15  
COMPARABLE TRANSPORT COST ANALYSIS BY MODES  
(in VND per ton)

| CARGO/ Movement                               | COAL    |          |          | RICE            |         |          | CEMENT   |                 |         | FRUITS/ VEGETABLES |          |                 |
|---|---------|----------|----------|-----------------|---------|----------|----------|-----------------|---------|--------------------|----------|-----------------|
|   | Rail    | Trucking | Shipping | Inland Waterway | Rail    | Trucking | Shipping | Inland Waterway | Rail    | Trucking           | Shipping | Inland Waterway |
| <b>1. Short-Distance (Hanoi-Hai Phong)</b>    |         |          |          |                 |         |          |          |                 |         |                    |          |                 |
| Distance (in kms.)                            | 110     | 100      | 140      | 140             | 110     | 100      | 140      | 140             | 110     | 100                | 140      | 140             |
| 1.1 From origin - loading                     | 7,000   | 7,000    | 7,000    | 7,000           | 7,000   | 7,000    | 7,000    | 7,000           | 7,000   | 7,000              | 7,000    | 7,000           |
| 1.2 From origin by inland transport           | 25,000  | -        | 25,000   | 25,000          | 25,000  | -        | 25,000   | 25,000          | 25,000  | -                  | 25,000   | 25,000          |
| 1.3 Unloading-Loading                         | 7,000   | 7,000    | 7,000    | 7,000           | 7,000   | 7,000    | 7,000    | 7,000           | 7,000   | 7,000              | 7,000    | 7,000           |
| 1.4 Basic transport charge                    | 20,900  | 120,000  | 28,350   | 23,650          | 23,650  | 120,000  | 31,080   | 34,020          | 23,650  | 120,000            | 31,080   | 31,080          |
| 1.5 Unloading-Loading                         | 7,000   | -        | 6,700    | 6,700           | 7,000   | -        | 6,700    | 6,700           | 7,000   | -                  | 6,700    | 6,700           |
| 1.6 Inland transport to destination           | 25,000  | -        | 25,000   | 25,000          | 25,000  | -        | 25,000   | 25,000          | 25,000  | -                  | 25,000   | 25,000          |
| 1.7 Unloading                                 | 7,000   | 5,200    | 7,000    | 7,000           | 7,000   | 5,200    | 7,000    | 7,000           | 7,000   | 5,200              | 7,000    | 7,000           |
| 1.8 Other charges                             | -       | -        | -        | -               | -       | -        | -        | -               | -       | -                  | -        | -               |
| Total   | 98,900  | 139,200  | 106,050  | 108,780         | 101,650 | 139,200  | 111,720  | 111,720         | 101,650 | 139,200            | 111,720  | 108,780         |
| <b>2. Medium-Distance (Hai Phong-Da Nang)</b> |         |          |          |                 |         |          |          |                 |         |                    |          |                 |
| Distance (in kms.)                            | 892.7   | 800      | 610      | -               | 892.7   | 800      | 610      | -               | 892.7   | 800                | 610      | -               |
| 1.1 From origin - loading                     | 7,000   | 7,000    | 7,000    | -               | 7,000   | 7,000    | 7,000    | -               | 7,000   | 7,000              | 7,000    | -               |
| 1.2 From origin by inland transport           | 25,000  | -        | 25,000   | -               | 25,000  | -        | 25,000   | -               | 25,000  | -                  | 25,000   | -               |
| 1.3 Unloading-Loading                         | 7,000   | -        | 11,570   | -               | 7,000   | -        | 14,340   | -               | 7,000   | -                  | 18,850   | -               |
| 1.4 Basic transport charge                    | 147,296 | 311,120  | 75,030   | 160,686         | 160,686 | 311,120  | 75,030   | 170,000         | 170,000 | 311,120            | 75,030   | 170,000         |
| 1.5 Unloading-Loading                         | 7,000   | -        | 11,570   | 7,000           | 7,000   | -        | 14,340   | 7,000           | 7,000   | -                  | 18,850   | 7,000           |
| 1.6 Inland transport to destination           | 25,000  | -        | 25,000   | 25,000          | 25,000  | -        | 25,000   | 25,000          | 25,000  | -                  | 25,000   | 25,000          |
| 1.7 Unloading                                 | 7,000   | 7,000    | 7,000    | 7,000           | 7,000   | 7,000    | 7,000    | 7,000           | 7,000   | 7,000              | 7,000    | 7,000           |
| 1.8 Other charges                             | -       | -        | -        | -               | -       | -        | -        | -               | -       | -                  | -        | -               |
| Total   | 225,296 | 325,120  | 162,170  | 238,686         | 238,686 | 325,120  | 167,710  | 176,730         | 248,000 | 325,120            | 167,710  | 167,710         |
| <b>3. Long-distance (Hanoi-Ho Chi Minh)</b>   |         |          |          |                 |         |          |          |                 |         |                    |          |                 |
| Distance (in kms.)                            | 1,725.2 | 1,700    | 1,520    | -               | 1,725.2 | 1,700    | 1,520    | -               | 1,725.2 | 1,700              | 1,520    | -               |
| 1.1 From origin - loading                     | 7,000   | 7,000    | 7,000    | -               | 7,000   | 7,000    | 7,000    | -               | 7,000   | 7,000              | 7,000    | -               |
| 1.2 From origin by inland transport           | 25,000  | -        | 31,080   | -               | 25,000  | -        | 31,080   | -               | 25,000  | -                  | 31,080   | -               |
| 1.3 Unloading-Loading                         | 7,000   | 7,000    | 11,570   | -               | 7,000   | 7,000    | 11,570   | -               | 7,000   | 7,000              | 11,570   | -               |
| 1.4 Basic transport charge                    | 258,780 | 778,600  | 95,760   | 284,658         | 284,658 | 778,600  | 95,760   | 284,658         | 284,658 | 778,600            | 95,760   | 284,658         |
| 1.5 Unloading-Loading                         | 7,000   | -        | 11,570   | 7,000           | 7,000   | -        | 11,570   | 7,000           | 7,000   | -                  | 11,570   | 7,000           |
| 1.6 Inland transport to destination           | 25,000  | -        | 25,000   | 25,000          | 25,000  | -        | 25,000   | 25,000          | 25,000  | -                  | 25,000   | 25,000          |
| 1.7 Unloading                                 | 7,000   | 7,000    | 7,000    | 7,000           | 7,000   | 7,000    | 7,000    | 7,000           | 7,000   | 7,000              | 7,000    | 7,000           |
| 1.8 Other charges                             | -       | -        | -        | -               | -       | -        | -        | -               | -       | -                  | -        | -               |
| Total   | 336,780 | 799,600  | 188,980  | 362,658         | 362,658 | 799,600  | 188,980  | 188,980         | 362,658 | 799,600            | 188,980  | 188,980         |

Assumptions:

- Coal (cargo type 1), rice (cargo type 2), cement (cargo type 3) and fruits and vegetables (cargo type 2). These are based on inland waterway and rail tariff schedules.
- Handling charge from warehouse to truck at origin of 7,000 VND/ton based on current rates.
- For unloading from the ship to truck (v.v) the rate is based on Saigon Port Tariff using ship's crane for each cargo category.
- Inland transport mode is trucking at current rate of 250,000 VND/10 tons/30 kms.
- Trucking charges per km. is based on current rate levels: 457.5 VND/ton-km. (Hanoi-HCM) and 398.9 VND/ton-km. (Haiphong- Da Nang).
- Shipping charge is 63 VND/ton-km. from Haiphong to HCM. (based on 1,520 kms. distance).
- Cargo from Hanoi is first barged to Haiphong to be transferred to the vessel going to HCM.

For bulk commodities such as coal, cement, clinker, ore, etc., coastal shipping has to compete with rail, inland waterways and, sometimes, even trucking. Rail and inland waterway currently offer similar charges and level of service and so become competing modes where routes overlap. Trucking is usually far too expensive for all but short hauls as summarized below.

| <u>Mode</u>      | <u>VND/ton-km.</u> |
|------------------|--------------------|
| Inland Waterways | 135-405            |
| Rail             | 150-190            |
| Coastal Shipping | 60 - 130           |
| Trucking         | 500-950            |

Ideally such comparisons should be made using economic, or social costs, which remove taxes, subsidies and other transfer payments and also take account of environmental and accident costs. Economic costs represent the overall costs to the Vietnam economy and are the appropriate basis for assessing the optimum role of coastal shipping for the country.

The current basis for taxation in coastal shipping is different from that for other inland modes and imposes lower profit and turnover taxes. Port charges for coastal shipping may also be cross-subsidized from international shipping. These factors make coastal shipping costs appear to be cheaper than they really are in economic terms. However the distortion is probably even greater for rail transport where charges are generally below costs and so this mode would be even less favorable in economic terms. For roads too, fuel and other vehicle taxes are set at low levels in Vietnam so that costs of infrastructure provision, traffic congestion, noise, air pollution and accidents are not fully paid by road freight users. These effects should ideally be taken into account when developing transport policy (particularly when setting user charges for infrastructure).

In the near future, more competitive forms of coastal transport such as Ro-Ro and container ships may provide regular liner services on main routes, allowing this mode to play a much larger role in the transport of domestic cargo.

#### (b) Passenger Transport

Coastal shipping plays only a small role in passenger transport in Vietnam. The competitiveness of the different modes of transport depends on the fares and service levels offered. Air services have only a limited market, for high-income Vietnamese and foreigners who can afford domestic air travel. Bus transport offers relatively competitive fares along with convenient, frequent services with good connections, particularly for inter-provincial trips, and is the most common mode used by Vietnamese travelers.

A survey of passengers was conducted by the JICA Railway Study Team in June-July 1995 in order to determine the preferences and characteristics of long distance passengers in Vietnam. The major findings are as follows:

- 50% of air passengers are making government business or other "official" trips,
- 14% of HCMC-Hanoi railway passengers are on such "official" trips,
- 30-40% of all bus and rail trips are undertaken for personal business purposes,
- time savings is an important consideration for air passengers, rail passengers preferred safety and comfort, while bus passengers considered frequency of service and time savings as major factors, and
- more than 50% of passengers on all transport modes considered the fares to be reasonable except in the case of the Hanoi-HCMC rail service.

Railways have been losing passengers to bus transport in recent years due to the lack of attractive services, including convenient feeder services to and from stations. Furthermore, since free market reforms started, expenditure on road improvements has increased and a large number of privately-owned bus companies has been established who compete based on lower fares and improved services. As a result, passengers have made less use of rail services, despite lower fares on some routes.

Coastal shipping has apparently also been losing passengers to buses in recent years. For example the regular passenger service plying between Haiphong Port and Saigon Port has been withdrawn and minimal interprovincial services are provided between certain ports. It is likely that the inconvenient and slow shipping services are a major reason for this trend. To confirm this the Study conducted passenger shipping surveys on selected routes in the Haiphong and Quang Ninh area, and the HCMC and Vung Tau area. The results show that the passenger fares are much higher than bus fares - generally about 300 VND per passenger-km in Haiphong and Quang Ninh area, but even higher on the HCMC - Vung Tau route due to the tourist market. The biggest problem which passengers perceive is doubtful seaworthiness.

While continued growth in island and tourist services can be expected, there appears to be limited scope for growth in interprovincial shipping services, although VINASHIP is contemplating restoring the Haiphong - Saigon service in future. However such services would only attract significant traffic if much lower fares or some other value-added service such as car ferries is introduced.

#### **4.3 Public Investment in Water Transport Sector**

The public investment in coastal shipping is difficult to define in precise terms considering that this sector is inextricably part of international shipping and relatively undeveloped in Vietnam. It is therefore necessary to define public investment in coastal shipping in the context of the water transport sector of which it is part. On the basis of available information provided by the Ministry of Planning and Investment, the Ministry of Transport and the transport studies previously undertaken, the water transport sector has been defined to include both the inland waterway and the seaports sub-sectors.

Section 4.3.1 presents a discussion of public investment in the transport sector and its sub-sectors, while Section 4.3.2 considers the future allocation of public investment in the water transport sector.

### 4.3.1 Public Investment in the Transport Sector

The public investment resources for the transport sector mainly come from the central budget and it is the Ministry of Planning and Investment (MPI) that allocates the required funding of each government ministry or agency involved with the transportation sector. In case of a short-fall in government funds for projects, then the government through the Ministry of Transport shall obtain some part of the funds from the state-owned Development Investment Bank. Likewise, the government can tap funds from Official Development Assistance (ODA). In this section, however, domestically available public investment for infrastructure construction and equipment are specifically discussed based on the statistics provided by the Ministry of Planning and Investment.

#### (a) Available Resources for Public Investment

Table 4.3.1 presents the different sources of public investment in the transport sector over the period 1991 to 1995. The investment capital sourced from the state budget is used mainly by the MOT, other ministries, agencies and provinces. MOT can also enjoy funds from a state-owned development investment bank (so called credit investment), a depreciation fund, and other sources. The depreciation fund is available only for reconstruction of existing infrastructure. MOT used to distribute the profits from port authorities to other transport modes, but the system was suspended in 1993. After then, all profits from port authorities had to be given over to the state budget.

Table 4.3.1

### SOURCES OF PUBLIC INVESTMENT IN THE TRANSPORT SECTOR, 1991-1995 (in million VND)

| By Source                            | 1991    | 1992      | 1993      | 1994      | 1995      |
|--------------------------------------|---------|-----------|-----------|-----------|-----------|
| 1. State Budget                      | 510,100 | 949,900   | 1,549,800 | 1,907,900 | 2,220,000 |
| 2. Credit Investment (MOT)           | 29,420  | 5,900     | 2,000     | 31,670    | -         |
| 3. Depreciation Fund (MOT)           | 26,490  | 35,600    | -         | 20,000    | 30,000    |
| 4. Capital from Port Authority (MOT) | 35,354  | 18,354    | -         | -         | -         |
| 5. Other Sources                     | 52,018  | 120,240   | 244,909   | 97,700    | 90,000    |
| Total                                | 653,382 | 1,129,994 | 1,796,709 | 2,057,270 | 2,340,000 |

Source: Ministry of Planning and Investment, 1996



(b) Distribution of Public Investment

The MPI provides funds for capital investment, including transport infrastructure, whereas expenditure for repair and maintenance of infrastructure in the state sector is originally released from the Ministry of Finance. It is noted that the capital investment for the transport sector is allocated to different government ministries/agencies that govern specific sub-sectors of transport infrastructure, such as:

|                             |   |
|-----------------------------|---|
| Ministry of Transport       | - roads, inland waterways, railways, seaways and civil aviation |
| Ministry of Trade           | - roads, seaways and pipelines                                  |
| Ministry of Industry        | - roads and seaways   |
| Ministry of Forestry        | - roads   |
| Ministry of Agriculture     | - roads, seaways  |
| Tourism Corporation         | - roads   |
| Ministry of Defense         | - roads, inland waterways, seaways and airways                  |
| Ministry of Interior        | - roads and inland waterways                                    |
| Ministry of Construction    | - roads   |
| Ministry of Foreign Affairs | - roads   |
| Provincial authorities      | - roads, inland waterways and seaways                           |

MOT's share of total capital investment in the transport sector has increased from 44.7% in 1991 to 63.3% in 1995 despite a decrease during 1992 and 1993 to around 35%. The provinces' share has been declining which implies that investment in transport has been increasingly concentrated at national level. This partly reflects the government's policy of MOT of financing large scale infrastructure to support international trade. (Refer to Table 4.3.2)

Table 4.3.2  
COMPARISON OF MOT AND PROVINCES CONTRIBUTIONS TO PUBLIC INVESTMENT IN THE TRANSPORT SECTOR, 1991-1995  
(in million VND)

|   | 1991    | 1992      | 1993      | 1994      | 1995      |
|---|---------|-----------|-----------|-----------|-----------|
| <b>Total Capital Investment in Transport Sector</b> | 653,382 | 1,132,780 | 1,796,709 | 2,057,270 | 2,340,000 |
| <b>1. MOT</b>                                       | 292,364 | 425,040   | 635,600   | 1,297,770 | 1,481,600 |
| a. State Budget                                     | 201,100 | 362,400   | 633,600   | 1,246,100 | 1,451,600 |
| b. Credit Investment                                | 29,420  | 5,900     | 2,000     | 31,670    | -         |
| c. Depreciation Fund                                | 26,490  | 35,600    | -         | 20,000    | 30,000    |
| d. From Port Authority                              | 35,354  | 21,140    | -         | -         | -         |
| e. Other Sources                                    | -       | -         | -         | -         | -         |
| <b>2. Provinces</b>                                 | 302,000 | 577,000   | 898,300   | 635,000   | 680,000   |
| <b>3. Other Ministries</b>                          | 7,000   | 10,500    | 17,900    | 26,800    | 88,400    |
| <b>4. Others</b>                                    | 52,018  | 120,240   | 244,909   | 97,700    | 90,000    |
| <b>% share of MOT</b>                               | 44.7    | 37.5      | 35.4      | 63.1      | 63.3      |
| <b>% share of Provinces</b>                         | 46.2    | 50.9      | 50.0      | 30.9      | 29.1      |

Source: Ministry of Planning and Investment, 1996

### (c) Allocation of Public Investment to Subsectors

The allocation of public investment to transport subsectors between 1991 and 1995 is shown in Table 4.3.3 in monetary values while the percentage shares of the different subsectors and the yearly increase/decrease rates of the subsectors are indicated in Table 4.3.4 and Table 4.3.5 respectively. The following characteristics can be pointed out from the tables:

- The trends in central budget allocation among the sub-sectors in transport showed an emphasis towards the roads sub-sector which in 1995 obtained 1.56 million VND, equivalent to 67 % of the total transport sector investment. The water transport sector (seaports and inland waterways) had a share of only 16.8 % in 1991 and this further decreased to 15.1 % in 1995. This corresponds to only half of the railway investment share or just one-sixth of the road investment's share of total transport investment.
- The total investment allocation by the central government to the transport sector since 1991 registered increases in terms of amount but at a decreasing rate. This may indicate that the relatively large amounts up to 1993 were intended for urgent projects for new construction and for repair and rehabilitation. The smaller increases in succeeding years' budgetary allocation from 1993 to 1995 could reflect less urgent investment needs in the sector (which could make do with resources needed only to sustain and maintain the existing infrastructure).
- The average growth in the amount of capital investment for inland waterway has been the highest among the transport sub-sectors although in absolute terms, it has the lowest amount of allocation or only 3.4% of the transport sector's total investment on average.
- Seaports obtained about four times the amount received by inland waterways during the years 1991 to 1992. In the following years 1993-1994, the difference in the allotments had narrowed, with seaport's allotment being only triple the amount allocated to inland waterways. In 1995, the funds allocated to seaports was only 119% higher than the funds allotted to inland waterway which indicates that the government, through the MOT, is now giving more importance to inland water transport.

Clearly, the water transport sector's investment budget has been very limited compared with other sub-sectors (especially the road sector which obtained more than half of the total investment budget for the transport industry) implying low priority being given to the water transport sector. Over the years, the small budget allowance for the water transport sector has resulted in inefficiency and very low productivity of this sector (in terms of cargo volumes transported). Further, in some ways, the limited expenditure restricted the ability of the water transport sector to respond to the needs of both domestic and foreign trade, as well as the tourism sector, which are the key growth areas in the country.

Table 4.3.3

**ALLOCATION OF PUBLIC INVESTMENT TO TRANSPORT MODES**  
(in million VND)

| Sub-sector         | 1991    | 1992      | 1993      | 1994      | 1995      |
|--------------------|---------|-----------|-----------|-----------|-----------|
| Capital Investment | 654,582 | 1,144,072 | 17,86,409 | 2,032,270 | 2,338,500 |
| Railway            | 65,554  | 136,490   | 139,409   | 160,000   | 190,000   |
| Road               | 438,005 | 821,107   | 1,243,058 | 1,359,140 | 1,560,436 |
| Inland Waterway    | 18,520  | 17,045    | 50,642    | 73,930    | 110,514   |
| Seaports           | 88,685  | 101,765   | 159,300   | 221,700   | 242,350   |
| Pipeline           | 1,500   | -         | -         | -         | -         |
| Airway             | 40,318  | 67,665    | 194,000   | 217,500   | 235,200   |

Source: Ministry of Planning and Investment, 1996.

Table 4.3.4

**DISTRIBUTION OF PUBLIC INVESTMENT BETWEEN TRANSPORT MODES**  
(in percent)

| Sub-sector      | 1991  | 1992  | 1993  | 1994  | 1995  | Ave. Share |
|-----------------|-------|-------|-------|-------|-------|------------|
| Total Transport | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0      |
| Railway         | 8.6   | 11.9  | 7.8   | 7.9   | 8.1   | 8.6        |
| Road            | 68.1  | 71.8  | 69.2  | 66.9  | 66.7  | 68.2       |
| Inland Waterway | 2.9   | 1.5   | 2.8   | 3.6   | 4.7   | 3.4        |
| Seaports        | 13.8  | 8.9   | 9.4   | 10.9  | 10.4  | 10.3       |
| Airway          | 6.3   | 5.9   | 10.8  | 10.7  | 10.0  | 9.5        |

Table 4.3.5

**PERCENTAGE INCREASE/DECREASE OF PUBLIC INVESTMENT BY MODE**  
(in percent)

| Sub-sector      | 1992/1991 | 1993/1992 | 1994/1993 | 1995/1994 | Ave. Growth |
|-----------------|-----------|-----------|-----------|-----------|-------------|
| Railway         | 148.2     | 2.5       | 15.1      | 18.8      | 46.2        |
| Road            | 87.5      | 51.4      | 9.3       | 14.8      | 40.8        |
| Inland Waterway | -5.3      | 197.9     | 47.9      | 51.4      | 72.8        |
| Seaports        | 15.6      | 67.6      | 31.2      | 9.7       | 31.0        |
| Airway          | 69.2      | 189.6     | 12.1      | 8.4       | 69.8        |
| Total           | 77.9      | 57.0      | 13.2      | 15.1      | 40.8        |

(d) Allocation of State Budget to Water Transport Sector

The state budget is the most stable and abundant source among domestically available capital investment resources. It is also essential as a counterpart fund for ODA projects. Table 4.3.6 shows what projects have been implemented by the state budget allocation in the water transport sector.

Table 4.3.6  
STATE BUDGET FUNDING OF PROJECTS IN THE WATER  
TRANSPORT SECTOR  
(in million VND)

| Project Name                     | 1991  | 1992  | 1993   | 1994   | 1995   |
|----------------------------------|-------|-------|--------|--------|--------|
| <b>Seaport Subsector</b>         | 6,195 | 6,765 | 29,300 | 76,000 | 90,550 |
| Haiphong Port                    | 1,400 | 1,700 | 500    | 2,300  | 10,300 |
| Cai Lan Port                     | 2,795 | 1,300 | 12,000 | 14,850 | 8,450  |
| Cua Lo Port                      | 0     | 0     | 0      | 3,700  | 8,000  |
| Qui Nhon Port                    | 1,200 | 765   | 12,500 | 18,000 | 3,000  |
| Other Ports                      | 800   | 3,000 | 4,300  | 37,150 | 60,800 |
| <b>Inland Waterway Subsector</b> | 4,800 | 5,170 | 8,642  | 45,060 | 66,514 |
| Hanoi Port                       | 0     | 400   | 250    | 1,500  | 2,405  |
| Viet Tri Port                    | 380   | 300   | 750    | 1,200  | 150    |
| Pha Lai - Viet Tri Route         | 0     | 650   | 532    | 2,200  | 5,020  |
| Hanoi Route                      | 700   | 875   | 800    | 3,420  | 1,322  |
| Da River Route                   | 1,000 | 707   | 775    | 2,120  | 1,425  |
| Ninh Phuc Port                   | 0     | 0     | 0      | 2,870  | 3,788  |
| Tan Thuan Port                   | 500   | 0     | 200    | 5,000  | 12,000 |
| Thu Duc - Kien Luong Route       | 2,000 | 1,900 | 2,300  | 3,840  | 5,427  |
| Quan Lo - Phung Hiep Route       | 60    | 150   | 1,200  | 2,690  | 5,515  |
| Other Constructions              | 160   | 188   | 1,835  | 20,220 | 29,462 |

Source: Ministry of Planning and Investment, 1996

#### 4.3.2 Financing of Future Public Investment in Water Transport

Due to the geographical advantage of a long coast line suitable for coastal shipping, the socio-economic development strategy of the country up to the year 2000 and onwards has incorporated the development of the water transport sector. The public investment requirement of the water transport sector can be divided into the following:

- Seaport system development;
- National fleet development;
- Inland waterways development; and
- Development of maritime related industries and services

Public investment cannot supply all capital requirements. Substantial amounts of private investment are also required for vessels and other equipment not included in the public investment plan. According to the World Bank guidelines described in Section 2.4.2, the investment in equipment could increase capital requirements by 40%. Because of budgetary constraints, the MOT is actively seeking ways to utilize alternative sources of finance for its public investment plans. Various financial arrangement such as credit fund, international assistance, JV or BOT projects and self-financing arrangements are worth considering. According to MOT, capital for its investment plans could be obtained using the following contributions:

- 22-25% from the state budget;
- 50-60% from ODA fund, including any form of joint venture with foreign sources, such as BOT forms;
- 15-17% from credit source and the self balancing fund from all transport related services; and
- 5-7% from the contribution of people in the form of labor, materials or money.

The total investment planned in the water transport sector between 1996 and 2010 is estimated by MOT to be US\$ 4.3 billion (see Table 2.4.2). Assuming that 30% of this is equipment financed outside the public investment plan and assuming that 22-25% of the total investment is allocated through the state budget, the water transport sector would have to receive from the state budget US\$ 0.66 - 0.75 billion. In 1995 the amount allocated to water transport from the state budget was only US\$ 0.03 billion. If this expenditure was maintained in future years the total amount spent between 1996 and 2010 would be only US\$ 0.45 billion which is much less than the required amount. However allowing for future increases in the state budget of about 10% per year (in real terms) as the economy grows, the projected expenditure from the state budget could be achieved.

Even if the central budget can make these funds available, the main factor determining whether or not the planned investments can be made is whether or not the ODA finance, which is assumed to constitute over 50% of total public investment, will be available.