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X. Phuong. Nguyen
Ho Chi Minh, University of Transport, Ho Chi Minh city, Vietnam

V.Vang. Le
Ho Chi Minh, University of Transport, Ho Chi Minh city, Vietnam

V. Huong. Dong
Ho Chi Minh, University of Transport, Ho Chi Minh city, Vietnam

Correspondence:
V. Huong. Dong
Ho Chi Minh, University of Transport, Ho Chi Minh city, Vietnam

How to develop the inland waterway transportation in Mekong Delta, Vietnam

X. Phuong. Nguyen, V.Vang. Le, V. Huong. Dong

Abstract
Considered as a mode of transportation has many outstanding advantages, capable of carrying goods in large quantities, has the lowest cost (WB survey, said cheap 9 times the cost of transport by road), The safest and least polluted environment, but the effect of inland waterway transport in the Mekong Delta in the last time is not considered to be commensurate with the potential. How to open the flow, or in other words to awaken and exploit the potential? Inland waterway transport in the Mekong Delta becomes a spearhead transport force, not only the pressure drop for road transport, but also contributing to promoting socio-economic development for the area of nearly 20 million people is the issue is being the transport and many local special interest.

Keywords: domestic waterway, transportation, Mekong Delta

Introduction
The characteristics of the Mekong Delta - the land is considered as the granary, fishery and the largest fruit of the country, is the system of rivers, canals and canals in the world ... with a total length of nearly 28,000. Km. According to Decision No. 970 dated 15/4/2009 by the Minister of Transport, the route network (inland waterways) in the South and Mekong Delta has 101 routes with a total length of 3,186.3 km, And international. Of these, there are six routes from the border to the South China Sea (allowing 500-500T ships) and two horizontal routes connecting Ho Chi Minh City to provinces (which allow 300T vessels), including Sai Gon - Kien Luong route (via Thap 10 No. 2, 227.6 km long), Sai Gon - Kien Luong (via Lac Lap canal, 312.8 km long) and Sai Gon - Ca Mau (via Xa No canal, 386.6 km long). Mr. Pham Minh Nghia - Inland Waterway Transport Association of Vietnam said that all major rivers and tributaries, canals and drainage systems in the Mekong Delta flow through all concentrated industrial zones, residential areas, Resources ... create a connection, exchange extremely favorable. Many routes, river ports have direct access to the road system and important seaports, creating the link between modes of transport. Recently, it emerged as a potential factor that is tourism activities, water resorts with many ecotourism attractions, there are hundreds, even thousands of boats to serve tourists.
In terms of transport capacity, the whole region has about 160,000 inland waterway vessels with a total capacity of 5.5 million CV, with a total cargo tonnage of 5 million tons.
The volume of goods transported by inland waterway vehicles of the Mekong Delta reaches 51.5 million tons / year; Transportation volume in the region through TNC transportation increased from 30% in 2005 to 62% in 2012. However, according to experts, this number is still too modest compared to potential. From the perspective of state management, the Inland Waterway Transport Association of Vietnam considers that one of the inadequacies, limiting the efficiency of inland waterway transport is the proportion of investment in inland waterways compared to the beginning Transportation sector in the Mekong Delta provinces is not high. Experts said that while transportation costs accounted for 48% of the total transport load of the country, 80% of investment in transport was spent on expanding the road network.
The inland waterway traffic in the Southwest is still taking advantage of the main natural conditions, so the volume of dredge is large, the lack of navigation equipment and the signal buoy system. The biggest drawback is unmatched on main transport routes: limited curved radius, depth of each other on the same river, and static of river crossings such as bridges and low culverts. Great importance cannot go through.

At the same time, the existence of spontaneous wharfs, obstructing traffic and unsafe traffic, the dredging of canal streams is also a factor reducing the productivity of inland waterway transport at Southwest. There are 2,510 inland ports and wharves in the whole region, of which 92 inland water ports and 2,418 inland waterway wharves, of which more than 100 wharves are excluded. However, of the 2,167 river ports and wharves managed by the State, there are over 1,400 ports and wharves with a capacity of less than 10,000 tonnes per annum, and only 151 wharves capable of handling over 100,000 tonnes / male.

According to the Inland Waterways Administration of the South, in order to improve the efficiency of inland waterway transport in the Mekong Delta, the Prime Minister made many important decisions, including the Decision No. 11/2012 for approval. Transportation development planning for the key economic region of the Mekong delta to 2020 and orientation to 2030. In this spirit, the Department has made some solutions, in which the State has proposed policies to create conditions. Clearing the inland waterway; To increase the level of investment in upgrading and upgrading basically the synchronous infrastructure of the route flow, equipment and management means; Construction of a new road bridges with a clear span of boat and static is not appropriate. Studying and proposing the types of container transport means made by inland waterways in a rational and effective manner, in line with the planning of inland waterway ports and the situation of canal streams in each region, especially from the Mekong Delta provinces as well as South East to Ho Chi Minh City and Ho Chi Minh City - Cai Mep - Thi Vai route. The organization that provides the best support and forecasting information about the source of the business. To create favorable conditions for people and enterprises engaged in transport business to access and enjoy preferences from the Government's tax, fee, credit and support policies. To create mechanisms to encourage the transportation of goods by inland waterway means; To expand and develop the model of river transport and operate coastal lines; Enhanced connectivity with other modes of transport.

Fig. 1: Domestic waterway transportation in Mekong Delta

Potential of Mekong delta waterway transportation

According to the report of the Ministry of Transport, in 2010 - 2016, about 46 transport infrastructure projects have been completed in the Mekong Delta (39 road projects alone). Total investment is about VND 76,462 billion. In particular, investment capital mainly from government bonds accounted for 47% and state budget accounted for 19%; Off-budget investments are low (15%). The structure of investment capital by sector is also much more active, when the investment capital is mainly concentrated in the road sector is nearly 80%, while the region's strengths are inland waterways accounted for only 1%, goods Accounting for 13% of total investment over the period. Regarding the invested waterway project, the majority of capital was invested in two big projects, An Thoi seaport with total investment capital of VND 189 billion, and the project of large vessels for Hau river with Total investment of VND 9,781 billion. According to the Maritime Bureau, currently the logistics system of the region is very weak and has not yet been formed. It is only the warehouse of the agents with small scale, loading and management technology. Simple exploitation.

Traffic flow is dense, but not as fast as it is in depth. The waterway route from Ho Chi Minh City to Mekong Delta provinces must go through the Cho Gao canal, but this canal route still does not guarantee the width of the means of transport in increasing numbers. Up to now, although it has been completed upgrading and expansion phase I, but still need to upgrade phase II to meet the requirements. The number of ports and landing stages in the country is still high, but most of the equipment for loading and unloading goods has not been modernized and not synchronized, so the capacity of cargo loading and unloading is low; Many harbors lack of connecting roads.

Due to these reasons, cargo throughput in recent years is generally low, fluctuate in the 6.5 to 8.5 million tons per year. Nearly 80% of the region's goods still have to be transited through Southeastern ports.

Speaking at the conference "Mobilizing resources for transport infrastructure development and logistics system in the Mekong Delta" recently, Deputy Prime Minister Vuong Dinh Hue requested ministries and sectors chaired by the Ministry of Transport must be attended soon. Plans for the Government to accelerate the construction of infrastructure of the region, with particular attention to the development of transport by water, sea and logistics services. In the long run, it is necessary to study deep-water seaports as the outlet for commodities in the whole region. "Ministries should also advise the Government on policies and mechanisms to attract resources outside of the budget for infrastructure development.

Fig. 2: Cho Gao channel with more than 1.300 times of transportation/day

River channel route

- Ho Chi Minh City - Ca Mau route (coastal route): 16 km long section; Level III inland waterway engineering.
- Ho Chi Minh City - Ca Mau route (Xa No canal): The section through 167 km; Maintain Level III inland waterway engineering.
- Ho Chi Minh City - Kien Luong route (through Lap Vo canal): the section through 130 km long, maintaining grade III inland waterway technology.
- Ho Chi Minh City - Kien Luong (through Dong Thap Muoi canal) crosses the 107 km long section to grade III inland waterway technology.
- Moc Hoa - Ha Tien route: 105 km through section; upgrade; Rehabilitation of grade IV inland waterway technology.
- Cambodia - Cambodia border gate: crossing the area of 73 km; Maintain grade I inland waterway technology.
- The Hau river through Dinh An - Tan Chau (An Giang) estuary: the 107.5 km long section; Maintain grade I inland waterway technology.
- Rach Gia - Ca Mau (Ong Doc estuary) estuary: 158 km long, upgrading and upgrading grade III to inland waterway technology.
- Quan Lo - Phung Hiep intra-regional link road: 12 km in length; Upgrading and upgrading the grade-IV route to inland waterway technology.

Inland waterway port

To build and upgrade some river ports, including Tan Chau, Binh Long (An Giang), Tac Cau (Kien Giang) and Ong Doc (Ca Mau) ports. Of which, Tan Chau port has a tonnage of 500 ÷ 2,000 DWT and serves as a focal point for inland waterway vessels trading with Cambodia.

From the point of view of state management, the Inland Waterway Transport Association of Vietnam said that the biggest inadequacies to limit the effectiveness of the NDMs is that the proportion of investment in this method in the Mekong Delta provinces is too few compared to Invest in the whole sector of transport. Transport specialists have reported: "While transportation of TNM accounts for about 48% of the total transport load of the country, 80% of transportation investment is spent on expanding the road network."

General Director of U & I Logistics Joint Stock Company Nguyen Xuan Phuc (Binh Duong) urgent: Waterway transportation is not commensurate with the current potential and advantages. Vietnam's waterway system is responsible for 30% of the total domestic cargo traffic; The Mekong Delta alone accounts for 70% of the region's cargo traffic. Waterway infrastructure plays a key role in economic development but has not paid much attention to investment. The policy of attracting investment in developing waterway infrastructure has not been encouraged by state management agencies and authorities. Binh Duong has two large rivers, the Saigon River and the Dong Nai River, which go to deep water seaports in the Soai Rap and Thi Vai rivers. But on these two rivers, there are many bridges crossing with static apertures. The boat is very low, so large ships and boats carrying imported and exported goods can not go back and forth to trade goods. Means of waterway transportation have not been invested in quantity and size; Infrastructure infiltration has been on the rise, such as the loss of signaling system, illegal exploitation of resources, change of navigation channel, construction of riverine buildings, port works, etc. Renovation of the channel is not properly invested, many sections of the river have meandering flow, small curved radius, very dangerous for ships operating on the river, especially the rainy season. Being in the planning of seaport group No. 5 (port cluster in Ho Chi Minh City, Dong Nai, Ba Ria - Vung Tau), the Dong Nai province's Dong Nai is assessed to have potential for economic development. However, the NHS still remains at a potential level. According to the statistics of Dong Nai Department of Transport, the system of NDHD in the province is longer than 2600 km, of which about 200 km of waterway of 14 routes are being exploited well; The four ports of Dong Nai, Nha Be, Long Tau and Thi Vai are also planned to have port docks, a total of 44 ports, but currently only 15 are invested. Specifically, the port of Go Dau - Phuoc An port is planned eight ports, so far five ports come into operation. In the Nhon Trach district, only seven terminals were planned and 26 remaining were not built. Dong Nai ports serve more than 11 million tons of cargo each year, accounting for more than 15% of the plan (reaching over 80 million tons of cargo traffic by 2030). The port system, the Mekong Delta in the Mekong Delta has not yet met the requirements of transportation operations. Currently, seven coastal provinces and coastal provinces in the Mekong Delta have ports for the transportation of NDMs, however, the port and landing sites are small in size and scope. The bulk of the bulk of the bulk of the MSM shipments are concentrated in port complexes in Can Tho, all remaining ports are untapped. The main doors to the sea are facing many difficulties due to high sedimentation and fast, frequent dredging is expensive (Dinh An estuary, small mouth on Tien river, Hau river). Demand for goods transportation across the region increased sharply, forced to move by road to the port of South East, pushing up transport costs increased.

According to Port Authority of Can Tho, the navigation channel of Dinh An estuary is accreted, making ships with a tonnage of 3,000 tons or more cannot enter the ports in Ho Chi Minh City loading and unloading. Cho Gao and Tien Giang channels are the main channels to transport goods from the Mekong River Delta to Ho Chi Minh City. On average, about 1,300 turns of ships pass through each day, but after tens of years they have not been fully dredged. The canal becomes narrower, narrower, causing traffic congestion over time. Rach Nga boat cruise in Tan An (Long An) is the connecting point between the Thu Thua and Vam Co rivers, also the destination of the freight train from Ha Tien, Kien Giang according to Tam Ngan channel - Tri Ton Hau River, Tien River to Vam Co River to Ho Chi Minh City, also operate poorly due to annual sedimentation is too large. According to calculations by economists, a ton of cargo from the Mekong Delta is transported to Ho Chi Minh City ports for export by the NHS, costing about $ 10. On average, each year, the Mekong Delta to port to Ho Chi Minh City more than 10 million tons of goods for export, the total cost of about $ 100 million. If transported by road, the cost "up" about nine times the waterway. Recently, about 70% of goods in the Mekong Delta transported by land to Ho Chi Minh port to export. The main reason is that the Mekong Delta area lacks deep-water ports for large vessels such as Ho Chi Minh City, Nha Trang, Hai Phong. Only a small problem has shown that the development of transport modes.

Asynchronous load, asymmetric, creates the risk of wasting billions of dollars every year.

Conclusion

The inland waterway network in the Mekong Delta is 13,000 km long, but the transportation operation is too weak. There are currently only five of the more than 2,500 inland waterway ports in the region capable of loading and unloading containers. The Ministry of Transport's statistics show that 70% of the Mekong Delta's goods still have to be transported to the ports of Ho Chi Minh City and Cai Mep by road, causing the company to incur 10- %. Meanwhile, inland waterway transport capacity can hardly be increased due to inadequate infrastructure, lack of dedicated docks capable of handling containers.

In order to promote inland waterway transportation development, to effectively exploit inland waterway routes in the whole region and to connect with other modes of transportation in the most optimal way to promote economic development. - To reduce the pressure on road traffic and ensure social order in the region, the following tasks should be well done in the coming time:

Firstly, to perfect the planning strategy, formulate policy institutions and finalize legal documents to promote inland waterway transportation in the direction of creating the best favorable conditions for people for enterprises, Transportation capacity, reduced freight rates to promote inland waterway market development. Developing standards for inland waterway technical safety management and inland waterway environmental management techniques in line with international regulations.

Secondly, review and revise the master plans for inland waterway transport in the Mekong Delta key economic region accordingly, the plan should link the local areas and modes of transport. Other load to maximize the potential advantages of the region.

Thirdly, to mobilize concentrated funds to effectively implement important and urgent domestic waterways projects, which serve as a driving force for socio-economic development and security and defense.

Fourthly, to improve the quality of human resource training for development of the inland waterway transport sector; To organize the effective management and exploitation of existing ports, wharves and canals; To intensify the propaganda on waterway traffic law, inspection, patrol and control in order to raise the awareness of citizens and enterprises in strictly observing the law on inland waterway traffic, contributing to Minimize traffic accidents.

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