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Solutions for inland waterway transportation development in Vietnam

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Abstract

According to the Vietnam Inland Water Administration, water transport is the cheapest mode of transportation, environmental protection, safety, high volume transportation, super-weight cargo, ensuring sustainable development, increasing competition. Nation. Meanwhile, Vietnam's waterway transport system is widely developed with dense river density, ranking the fourth in the world with 3200 km of coastline and 240 river mouths into the sea. In the period 2010-2016, the market share of freight transport of inland waterways accounted for 17-19% of the entire industry, and the passenger transport market share accounted for 4-6% of the whole industry. By the end of October 2017, the whole country had 271 ports, including 258 cargo ports and 13 passenger ports. Currently, there are only 02 ports connected to the railway, namely Viet Tri Port and Ninh Phuc Port, but they have not been exploited. The country has 10,772 inland wharves, including more than 8,000 candle loading and unloading goods, more than 2,500 river wharves. The number of registered inland waterway vehicles (as of November 2017) is 252,000, accounting for over 53%; the total number of diplomas and certificates granted is 376,217 units, accounting for 41%. Despite the great potential, the volume of goods transport by inland waterways is still low, not promoting the advantages of the industry; infrastructure connected to ports and ports is not synchronized; old and outdated waterway transport means, used for many years; the investment capital for inland waterways is still low and the competitiveness of shipping enterprises is still weak.

Keywords: domestic transportation, transportation capacity, policy solution

1. Introduction

According to statistics of the Ministry of Transport, there are currently 45 national inland waterways (IWT) with a total length of about 7,075 km (the North has 17 routes, the South has 18 routes, the Central has 10 routes). These are arterial transport routes connecting major economic centers and industrial parks of the region and the whole country. The decentralized management of each route in accordance with Circular No. 46/2016 / TT-BGTVT dated December 29, 2016 of the Ministry of Transport. The signaling system on the route includes: 12,539 signal poles, 18,458 signboards, 3,070 signal buoys, 9,153 signal lights. Bridging system via the route: There are currently 251/532 bridges and constructions across the river located on the national IWT routes which have clearance for navigation which is lower than the specifications according to the approved planning level. By the end of August 2017, the whole country had 277 ports, including 220 ports on national inland waterways and 57 ports on local inland waterways. Most of the inland ports of cargo and passengers have been scattered and fragmented. Goods through the hub port only reach 60-70% of the design, including many types of goods, of which bulk cargo accounts for > 50% is the type of goods due to many types of transport means, it is difficult to modernize equipment. Loading and unloading. Except for some specialized ports (coal, cement, thermal power), the rest of the works, loading and unloading equipment in most ports are outdated. There are few inland ports qualified for container handling. Multi-modal transportation organization, logistics services at major head ports have not been implemented. The ports in the Northern Delta are all outside the dyke, restricted by the requirements for flood drainage limit, the dyke protection corridor, so connecting to the external road system needs to open the gate through the dyke very difficult. In 2016, the total volume of transport carried by the

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Vietnamese fleet is estimated at 123.8 million tons, an increase of 4% compared to 2015. Business situation of shipping companies in Vietnam in the past year is continuous with many difficulties due to excess supply of ships, low volume of goods, reduced freight rates. Many shipping companies, including large ones, continue to suffer losses. In particular, the market share of import and export of Vietnam's fleet in recent years has remained at 10-12%. The import and export market of Vietnam's seagoing ships is mainly Middle East, Southeast Asia and Asia, and a small number of Vietnamese ships have exported to Eastern European countries. For dry-bulk import and export, Vietnam's fleet occupies about 12% of the market. There are direct trains to markets Eastern Europe, Middle East, South America but in small quantities. For export and import of crude oil for export, Vietnam's fleet only gained modest market share. The reason is that the Vietnamese marine fleet has not met strict requirements on quality, safety standards, prevention of environmental pollution ... of foreign import-export companies. According to the Vietnam Ship Owners Association, in order to develop Vietnam's fleet from now to 2020, the Ministry of Transport and Vietnam Maritime Bureau should soon develop a program and plan for the development of the fleet according to the Government's direction. To submit to the Government a mechanism and policy to provide capital support for Vietnamese transport enterprises to invest in restructure the fleet. However, since most of the river ports in the North were built in the 1980s, the old, backward works, equipment and loading equipment were disrupted. Commodities through port terminals are less than 60% designed, mainly bulk goods; Coefficient of using wharves and warehouses low. There is not yet a river port that qualifies for container elevating. Many temporary wharf ports, which are not up to the technical standards for exploitation, are not regularly inspected (for stability, bearing capacity, anchorage ...). Environmental pollution and degradation of landscapes in ports and wharves have been and will continue to increase rapidly if will not restrictive measures. The domestic waterway of cargo fleet in VietNam which is planned until 2020 will be about 7,8 – 10.2 million tons of vehicles, there will be 6.8 -8.8 million tons to satisfy with development and 1.0 – 1.4 million tons to change the old ships which need to sell. About passenger fleet will be 90 – 125 thousand seats, there will be 10 thousand seats to satisfy with development and 80- 115 thousand seats to change the old ships which need to sell. With the development of road transport, the development of inland waterway transport is now a key task of the transport sector. Recently, Vietnamese Inland Waterway Administration has completed the detailed outline of the inland waterway system in the North to 2020 with orientation to 2030. In the future, the system of waterway ports will become the center connects to other modes of transport, contributing significantly to socio-economic development in the localities. According to a survey of the Transportation industry. Vietnam is one of the countries with the largest river system and largest river density in the world. However, investment in water transport is still limited (about 2.5% of investment in transport), thus not fully promoting the potential of inland waterway transport. Both the waterway network in the north is currently over 4.500 km are exploiting transport, of which the national route is 2.664 km, running through most of the

economic centers, urban areas and industrial parks. From the birth of Hydropower reservoir Hoa Binh, Son La, Thac Ba, Tuyen Quang and other hydroelectric power plants future such as Lai Chau, Huoi Quang, Ban Chat (Da River) contribute to regulate and reduce the amplitude of the oscillation of flood level, reduce sedimentation downstream of rivers; Contemporaneous also creates reservoirs hundreds of kilometers long and is the ideal transportation route. According to economic zoning, the North has formed clusters of clue ports clue: Ha Noi, Ninh Binh, Viet Tri, Hoa Binh, Ha Bac, Quang Ninh, Da Phuc. Other have addition there are 30 other ports serving the export demand, coal consumption of thermal power plants, cement, ship industry, transshipment super-heavy cargo.

2. Structure of domestic port in Vietnam

2.1. The Northern region

Northern waterway flows are mainly on Red river, Duong River, Thai Binh River and Luoc River. The waterway transport network connects the Red River Delta provinces with the port areas of Hai Phong and Quang Ninh, connecting with the Northern midland provinces through the Lo River. In addition, Quang Ninh is also the beginning of the sea-phase river transport route from the North to the South in order to share the burden on the road. The Northern region currently has 17 national inland waterways with a length of 2715.4 km, some routes are quite short and overlap with others so focus on 10 long-distance and shoulder-length routes. The main role connecting the whole region

2.2. Central Region

Mostly inland waterways are independent or only within each province (from Thanh Hoa province to Quang Nam province). The rivers have a sloping terrain, connecting the mouth of the sea to the inland to the remote districts of the locality. In these areas, in the rainy season, floods are often greatly affected by pipe floods, flash floods, the water level of rivers rises very fast, the flow is strong, but the water level also drops very quickly (only a few days after the flood.). The scope of exploitation of transport for seagoing ships is mainly from national highway 1 to the sea, some provinces have river routes capable of transporting water inland.

2.3. Southern region

The national inland waterways currently managed by the Central Government are 3,186.3 km. The network of rivers and canals with high density, flowing through most economic centers, urban centers and industrial parks, connecting river ports and seaports, connecting to the sea along many estuaries forms waterway transport axes. Advantage. Water transport in the southern plain is very developed. Annually, waterway transport accounts for 65-70% in tons and 70-75% in tons / km in freight of the whole region. The river network in the southern region is formed by two main river systems, the Dong Nai river system and the Mekong river system. These two river systems are connected by high-density canals such as Cho Gao Canal, Lap Vo - Sa Dec Canal, Hong Ngu Canal, Tan Chau Canal and Vinh Te Canal. After years of exploitation, the southern region has established the main transport routes, including two routes from the East Sea via Vietnam to Cambodia - Thailand:

- + Tien river route from Cua Tieu - Cambodian border
- + Hau river route from Dinh An estuary - to the Cambodian

border

The situation of non-peer-to-peer waterway routes, which have not been invested in dredging, diversifying and expanding channels, has greatly affected the inland waterway transport business. Some routes often dry up in the dry season: Hanoi - Son Tay - Viet Tri, Phi Liet River (Hai Phong), canals in Hai Phong city and Day River.

The phenomenon of exploiting mineral resources (sand, gravel) on the river without planning changes the flow, landslides of the river, creating shallow beaches, causing traffic congestion as on the Lo River route (Phu Tho), the Red River route (Hanoi, Hung Yen).

3. Solutions for development

The whole network of waterways in the North currently has more than 4,500 km in operation, of which the national route is 2,663.9 km, running through most economic centers, urban areas and industrial parks. The introduction of Hoa Binh, Son La, Thac Ba and Tuyen Quang hydropower reservoirs and future hydropower projects such as Lai Chau, Huoi Quang and Ban Chat (Da River) contributes to regulating and reducing the fluctuating amplitude. Flood levels, reduction of sedimentation in downstream rivers; at the same time create reservoirs hundreds of kilometers long and are ideal transport routes. According to the economic zoning, the North has formed clusters of focal ports: Hanoi, Ninh Binh, Viet Tri, Hoa Binh, Ha Bac, Quang Ninh, Da Phuc ports ... In addition, there are over 30 specialized ports, other, serving the export, coal consumption of thermal power plants, cement, shipbuilding industry, transshipment of super-weight cargo. However, because most of river ports in the North were built in the 1980s, dispersions, loading facilities and equipment are outdated. Cargo through the hub port is only less than 60% of the design, mainly bulk cargo; low utilization of berths and warehouses. No river port has been qualified to unload containers. Many temporary wharf ports, which do not meet exploitation technical standards, are not regularly inspected (in terms of stability, loading capacity, anchoring ...). Environmental pollution and landscape decline in ports and wharves have been and will continue to increase rapidly without restrictive measures. The inland waterway transport industry sets the goal by 2020: Focusing on renovating and upgrading the main transport corridors, improving the management and maintenance capacity of IWT routes and sea-phase transport routes. ... Contributing to increasing the market share of freight transportation from 18.62% -21.5% of the whole industry. To strive to upgrade and renovate 2,000 km of waterways by 2020, with a total tonnage of inland waterway transports of about 20-22 million tons and a total of 780 inland waterway passenger seats, of which there are over 1,000 VR-SB carriers participating in sea phase activities. Orientation of development of inland waterway transportation of Vietnam to 2020 by the Ministry of Transport is to make the best use of natural conditions while concentrating investment plans to maximize the advantages of Inland waterway transport (bulk cargo transport, super-heavy cargoes, low cost, minimizing environmental pollution), meeting the requirements of socio-economic development and economic integration To ensure sustainable development. Total investment capital for development of inland waterway transportation infrastructure until 2020 is about 37.000 billion VND.

According to the above orientation, waterway traffic will be developed in a synchronous way to the route flow, harbor, loading and unloading equipment, means of transport and management capacity to meet cargo and passenger transportation requirements with higher quality, reasonable price and safety. Investment in inland waterway infrastructure linking other traffic networks form a seamless, uninterrupted system... Combining the development of inland waterway transport with other sectors such as irrigation, hydropower. Open new routes such as coastal, international and container liner routes. To develop the transport fleet towards rejuvenation (average age of ship is 5 - 7 years), reasonable structure (tugboat pushes 30-35%, self-propelled ships 65-70%); Total fleet tonnage is 12 million tons; Increase the length of inland waterways managed and operated; Modernize the signaling system; Channeling of river sections through large urban areas. The Ministry of Transport has also planned to modernize some key ports and ports in key economic zones and specialized ports; improving the rate of mechanized loading and unloading for local ports; Construction of a number of passenger ports. By 2020, it will be able to transport 190-210 million tons of cargo and 530-540 million passengers. According to the above orientation, waterway traffic will be developed in a synchronous way to the route flow, harbor, loading and unloading equipment, means of transport and management capacity to meet cargo and passenger transportation requirements. With higher quality, reasonable price and safety. Investment in inland waterway infrastructure linking with other transportation network to create smooth, continuous system. Combining the development of inland waterway transport with other sectors such as irrigation, hydropower. Open new routes such as coastal, international and container liner routes. To develop the transport fleet towards rejuvenation (average age of ship is 5 - 7 years), reasonable structure (tugboat pushes 30-35%, self-propelled ships 65-70%); Total fleet tonnage is 12 million tons; Increase the length of inland waterways managed and operated; Modernize the signaling system; Channeling of river sections through large urban areas. The Ministry of Transport has also planned to modernize some key ports and ports in key economic zones and specialized ports; improving the rate of mechanized loading and unloading for local ports; Construction of a number of passenger ports. By 2020, it will be able to transport 190-210 million tons of cargo and 530-540 million passengers. To support the development of inland waterway transport, the Ministry of Transport is encouraging all economic sectors to participate in transport business. SOEs only hold a market share of around 10-15% to ensure a leading role, focusing on major flows, some key commodities.

According to reports of the Vietnam Maritime Bureau after more than 02 years of operation, coastal transport has achieved certain effects in the transport of goods, reducing the pressure for road transport, especially in the past The Ministry of Transport has resolutely implemented many synchronous solutions, including the work of controlling the load of road vehicles to develop the transport market has a reasonable structure, so vehicles VR-SB has been very More convenient to grow. According to the statistics of the port authorities, goods shipped through VR-SB through the port in 2016 reached nearly 12 million tons, of which about 8 million tons of goods shipped from the port

to, to leave the seaport and vice versa; with more than 13 thousand vehicle passes. In general, the number of means of transport and goods transported from seaports to seaports accounts for about two thirds of the total number of VR-SB vehicles carrying freight on the route. But besides the positive side, there are still many inadequacies. The VR-SB fleet now has more than 1,000 vessels and has a tonnage of over 20,000 tons (Compared to within 2 years of the opening of the route, no VR-SB vehicle was officially put into service on the route). This shows that the development investment for VR-SB vehicles is very hot, while the quality of crews working on means has not met the quality of service provided by VR-SB. Unprofessional and demanding safety of vehicles is not guaranteed, and hot development has led to fierce competition for cargo that has potential risks not only for lost Maritime safety but also imminent danger of breaking the structure of the shipping fleet inland. On the other hand, the size of VR-SB vehicles is currently growing beyond the planned development of river it was minister of Transport in Decision No. 4291/QD-BGTVT on December 24, 2013 Approve the master plan for development of river and river transport up to 2020 and orientation to 2030. About accident and incident. Since the implementation of coastal transport to date, there have been 10 accidents. The main causes of these accidents are technical breakdowns, bad weather effects, inexperienced crew members dealing with marine situations, improper operation of the lanes, etc. However, when the VR-SB vehicles have been accidents, maritime incidents have been directed by relevant agencies and units and port authorities to promptly provide rescue and support so no damage is caused to them. People. According to current regulations, VR-SB vehicles are not equipped with AIS equipment, EPIRB, so management agencies have not managed, monitored and monitored on the route of the means, especially when Means of accident, incident cause many difficulties for the specific location of the accident to conduct timely rescue. The thin body structure of the VR-SB vehicle is low, so the risk of an accident while traveling on the sea in bad weather. Along with that, the crew working on this means are lack and weak. At the same time, according to the Vietnam Register, it is very difficult for ships of II and III to operate too far away from the shore, so there is always the danger of unsafety and environmental pollution.

The interdisciplinary coordination plan to ensure inland waterway traffic order and safety in 2017 continues to be carried out under the theme of "Building Youth Transport Culture, with the goal of human life is above all." Accordingly, in 2017, the interdisciplinary 3 Department will focus on solving the outstanding and complex issues of traffic order and safety on the roads of the country, prevent the violations of law especially Means of doing business on waterways; Carry out the census of the number of inland waterway means and crew members, riders, shipping companies. At the same time, to coordinate with the inspectors in, strictly handle and suspend the operation of, for violations of, such as: overcompensation, overloading of waterway means at inland ports, violation of registration and registry In addition, inter-agency coordination will strengthen the inland waterway traffic safety corridors and investigate the Potential danger poses the risk of traffic accidents.

According to the Inland Waterway Administration of

Vietnam, the top issues in the national transportation sector are the situation in which businesses are not allowed to operate properly and unsafe conditions have not been fully resolved. It is common to have vehicles that carry too much water safely. In addition, at some cross-river passenger stations, large passenger traffic, leading to the situation of carrying more people allowed on the vehicle continuously occur. On the other hand, the situation of mining sand, gravel and minerals are not in accordance with regulations on the inland waterway is still quite complicated. Particularly, drivers who do not have proper diplomas or certificates; the status of the vehicle by the registry expiration date is still used. The Inland Waterway Administration of Vietnam estimates that these are important causes of many serious waterway accidents that have occurred over time. In order to strengthen the resolution of these violations, the objective of the interdisciplinary plan will be to promote propaganda and focus on handling violations committed by owners, . In addition, the 3 departments continue to strengthen the development of inland waterway infrastructure and review and adjust the signaling system in line with the current situation; Survey and locate traffic black spots to have a clearing plan. In addition, another important task of inter-agency coordination is the strict control of river crossings, vehicle registration, passenger vehicle conditions, Will be focused. At the same time, strengthening the management at inland waterway ports and wharves, inspecting and only allowing vehicles with safe conditions to be exported. For passenger transportation,

On the other hand, the training must also be renewed and strengthened to ensure sufficient number of operators of the means to ensure that the driver possesses a professional certificate, in accordance with the conditions of the means.

4. Conclusion

According to statistics of the Department of Inland Waterway, the number of inland waterway vessels in 2018 in Quang Ninh is the highest at 63,586 times with a total container volume of 87,557 TEUs. However, this figure is still very modest compared to the southern region and the assumed capacity of the IWT routes of the Northern region currently. Forecasting transport demand on the inland waterways in the North, we can see that the coastal area is a key spearhead of the Northern inland waterways. Typically, there are areas such as Song Chanh junction, up to 22 million tons (96%) and Cua Dau - My Loc, up 10 million tons (100%), the lowest area is Hai Phong - Nga Ba Nong increases 0.6 million tons reached (86%). According to the forecast, the inland waterway transport development line in the North is quite evenly and steadily in the increasing direction, but if the growth forecast for 10 years, this development is still quite slow compared to the area. Countries. With a dense network of rivers and canals creating a network of inter-regional connections throughout the country, the current growth forecast for the next 10 years of inland waterway transport in the Northern region is currently forecasted. A modest figure. Still know in recent years, the inland waterway transport of our country has made great progress but currently has not met the requirements and objectives set by the State. The inland waterway transport industry in Vietnam needs to constantly develop to be able to shorten the growth time according to the set roadmap and achieve the State's goals.

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