

NATIONALIZATION OF INLAND WATER NAVIGATION

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Introduction

Transport is an important component of the Indian economy. Since the economic liberalization of the 1990s, development of infrastructure within the country has progressed at a rapid pace, and today there is a wide variety of modes of transport by land, water and air. However, India's relatively low GDP per capita has meant that access to these modes of transport has not been uniform.

Motor vehicle penetration is low by international standards, with only 103 million cars on the nation's roads. In addition, only around 10% of Indian households own a motorcycle. At the same time, the automobile industry in India is rapidly growing with an annual production of over 4.6 million vehicles, and the vehicle volume is expected to rise greatly in the future. In the interim however, public transport still remains the primary mode of transport for most of the population, and India's public transport systems are among the most heavily used in the world. India's rail network is the 4th longest and the most heavily used system in the world, transporting 7651 million passengers and over 921 million tonnes of freight annually, as of 2011.

Despite ongoing improvements, several aspects of the transport sector are still riddled with problems due to outdated infrastructure and lack of investment in less economically active parts of the country. The demand for transport infrastructure and services has been rising by around 10% a year with the current infrastructure being unable to meet these growing demands. According to recent estimates by Goldman Sachs, India will need to spend US\$1.7 trillion on infrastructure projects over the next decade to boost economic growth.

Objectives

- Study about nationalization of Inland Water Transportation sector
- To study the major policy issues which have hampered the involvement of the private investors to participate in this sector
- Suggest some solutions for triggering the private sector involvement in the Inland water Transport.

1. Inland Water Navigation in Kerala

Today, the land transportation infrastructure in Kerala has reached the limit of their capacities and is failing to meet the ever-increasing demand of traffic. Further, development of sufficient capacities of road and rail system requires a huge investment and long duration for development.

The Inland Water Transport (IWT) system in Kerala can be revived for the movement of freight, passenger and tourist traffic. The IWT includes country boat movement for transportation of men and material, passenger service boats, ferry boats, barges for cargo movement in organized sector, passing of sea-going fishing vessels, Inland tourism, water sports etc. It is necessary in the present scenario of our growth to utilize the vast networks of waterways and navigable canals to reduce the pressures on the traffic system. It will help to provide an integrated mass and rapid transport network for all of Kerala. Development of IWT is essential not only for inland navigation but also to harness the enormous potentials in other sectors of the economy.

The city of Kochi is located on the western coast of India in Ernakulam district of Kerala. It is bound by Thrissur on the north, Idukki on the east and Kottayam and Alappuzha to the South. It has historically been the ancient trade gateway to the hills of Kerala which were revered by the traders for the spices it produced. It is, by all accounts, the commercial and industrial capital of Kerala. Blessed with natural beauty and good climate, the city also boasts of good road, rail and air connectivity with other Indian metropolises such as Mumbai, Chennai and Bengaluru. The development of Kochi has been mainly on account of the political, administrative and commercial importance it has enjoyed over the centuries. The discovery of the ancient port of Muziris has confirmed the importance of ancient Kochi as a major link on the maritime circuit for trade and business. There are many evidences of trade links between Kochi, China and ancient Rome in the form of Chinese fishing nets and seals found at several locations.

The West Coast canal system (205 km) comprising of West Coast Canal between Kottapuram-Kollam (168 km), Udyogmanadal canal between Kochi-Eloor (23 km) and Champakkara canal between Kochi-Ambalamugal (14 km) are what comprises of the National Waterway-3.

2 .Viability of IWT

A shift from road transport to IWT for both passengers and cargo usually contribute to more efficient use of resources and energy. Apart from navigational importance and employment potentials, inland waterways offer unique opportunities for the development of tourism. The natural beauty of lagoons, lakes, rivers and backwaters of Kerala attract a sizable portion of tourists mainly to places like Kochi, Alappuzha and Kumarakom. A coordinated development of IWT system and tourism infrastructure would increase the tourist traffic both foreign and domestic. A full day onboard journey through the backwaters provides an opportunity to witness the natural life of the people around and the scenic beauty of the place.

Luxury boats, both of the Government and private parties, operate from the main boat jetty during the season. The State Water Transport Department operates boat services at Muthiraparambu (West Kallada), Guhanandapuram, Ayiramthengu, Munrothuruthu and Alappuzha also, besides Kochi. The other canals are Paravur canal, Kollam canal and Chavara canal. The Water Transport Department and the Inland Navigation Corporation of the state transports over 70,000 passengers on a daily basis. The Rivers in the state have 840 km long navigable routes. These routes are navigable for smaller boats and country crafts only during the monsoon seasons.

During the rest of the year, navigation is possible only in lower reaches. The inland feeder canals interconnect the rivers. The state has the benefit of a major port at Kochi, which is capable of handling container, break bulk, dry bulk, liquid bulk and passenger traffic. Three intermediate and 10 minor ports also lie along the coast of Kerala. Development of Vizhinjam port near Thiruvananthapuram and possibility of extending the West Coast Canal to the Kolachal port in Tamil Nadu, further adds to the traffic potential of the waterways. Developmental works such as deepening, widening, bank protection.etc in respect of West Coast Canal at a stretch of 205 km from Kollam to Kottappuram was declared as National Waterway No.3 in 1993, are being carried out by Government of India. In the proposed extension of the waterways, 14 terminals are planned. These terminals will begin the container movement from Vallarpadam to various destinations in Kerala and to neighboring states like Tamil Nadu and Karnataka. Studies suggest that rehabilitating of the Inland Water Transport system with participation by private sector and local communities could relieve pressure on parts of the State road network. The road transport system in the Kochi City Region has been strained to its maximum capability and further advancement would only lead to a break down in the system. A shift from road to inland water could relieve the pressure from the road transport. A more efficient Inland Water Transport network could provide environment friendly and cost-effective support as an alternative to road transport.

Ernakulam is one city which has a very huge inland navigation potential. The city is surrounded on all sides by navigable water bodies. In fact, the easiest connection between the city centre (Ernakulam) and parts of the old city (Mattanchery, Fort Kochi, etc.) is through inland waterways. The State Water Transport Department (SWTD) operates frequent boats from Fort Kochi/Mattancherry/Vypeen/W. Island and Ernakulam Main Boat Jetty. SWTD boats usually carry around 100 passengers, and are generally made of wood or steel. A few fiber-made boats were introduced, but were discontinued on most routes following operational difficulties during adverse conditions. Recently, the department announced plans to add about 15 Steel boats. These boats, being built by Steel Industries Limited Kerala (SILK), Kannur are being introduced in a phased manner.

There is a boat every 15 - 25 minutes between Ernakulam and Fort Kochi. Almost all the trips run packed to capacity - SWTD makes it a point to sell only as many tickets as the seating capacity of the boat allows. Overcrowding is strictly prohibited and hence during weekends passengers often have to return without being able to get tickets. The ticket fare of a boat ride in a KSWTD boat from the Ernakulam jetty to Mattancherry Island is Rs. 2.50 (compared to Rs. 9-15 by a bus depending on the bus boarded) - and the boat completes the journey in just 15 minutes (compared to 30-45 minutes by road). And in the 15 minutes, the boat takes you on a ride through the shipping channel, giving you an awesome view of Cochin Port and the surrounding tourist places.

According to the employees of the SWTD, the priority issues being faced by the water transport sector are:

- The silting of water channels
- The lack of new boats and spare parts necessary for maintenance
- The spread of the Water Hyacinth (African weeds)
- The low revenue and consequent negligence of the government
- The occasional overcrowding
- non-cooperation of passengers to comply with safety guidelines
- The absence of regular checking and inspection on the fitness of boats by any competent authority.

3. National Waterway -3

National Waterway 3 in Kerala is the smallest of the three national waterways. It is made up largely of coastal backwaters of the Arabian Sea. A large part of this backwater, adjoining the Kuttanad region of Kottayam and Alappuzha districts, has developed a lifestyle that involves multiple use of the waters. A system of gates from both the north (Thanneermukkom) and the south (Trikkunapuzha) controls the extent of salt water that is maintained in the Vembanad Lake (of which a large channel is designated as the national waterway) and the waters are used both for prawn cultivation and fishing as well as for rice growing.

There is evidence that water based transport was historically an important, even predominant mode of movement. For many islands in the Vembanad Lake, and islands such as Vypeen, off Cochin, water based movements were the only mode for a long time, to transport everything from fresh water to food to construction materials and for trade. Even now, fresh water supply to some islands is done by barge.

Today, there is some movement by water, but with a huge increase in road connectivity and bridges, the primacy of water movement is a thing of the past. In the Cochin area, with the three part Goshree bridges, the islands of Bolgatty, Vypeen and Vallarpadam are connected to the mainland by road, which has already had a big impact on passenger ferry services to those islands.

Apart from commuter movements and local trade through water based transport, there are two other aspects of water based transport that need to be discussed: freight movements and tourism related activities. The major tonnage of freight movement in Kerala is between Cochin ports to a few industries in the vicinity.

3.1 Fertilizers and Chemical Travancore (FACT)

Fertilizers and Chemicals Travancore, is a fertilizer and chemical manufacturing company in Kochi, Kerala. FACT accounts for the large part of this traffic, with two factories on two canals off the main waterway, but which are also considered part of the National Waterway 3, namely the Champakkara canal and the Udyogamandal canal. Raw materials for these fertilizer plants (sulphur, rock phosphate, phosphoric acid and furnace oil) forms the major part of barge movements on NW-3. The other occasional user is Binani for moving zinc. The current rates for these movements (Cochin port to Udyogamandal and Ambalamugal) are Rs 55 per Ton, which are just enough to cover operating costs of the barges. The movement is possible because FACT has invested in barge handling facilities at both ends, a long time ago.

In earlier days, ammonia gas used to be transported by tanker barges, which is now discontinued. Interestingly, in the past, finished goods from FACT were also transported by barge from the factories to distribution points in Kerala, especially in Kottayam, Alappuzha, Ernakulam and Kollam districts. The barge loading facility is still there, and chute loading is possible at Udyogamandal. These were carried by contractors in 30-40 country boats upto about 1993. This is viewed as a viable size of shipment even now (compared to 10 Ton trucks), but these operators are no longer present. Similarly, tanker barges were carrying petroleum products from Cochin port to Kollam, but for reasons of labor management and also problems of the waterway on the southern side, this movement has stopped.

The other major water based commercial activity is tourism, especially houseboat cruises and some amount of water sports. The houseboats are mainly 5-10 capacity freight barges, now converted into vessels for carrying tourists.

Total Cargo moved through NW-3 in the past few years is:

2009 - 2010	:	06.83 L - tonnes
2010 - 2011	:	08.56 L - tonnes
2011 - 2012	:	13.44 L - tonnes
2012 - 2013	:	12.36 L - tonnes

Looking at the above it is clear that although the amount of cargo moved through the NW 3 has increased from the year 2009-2010 till present, it has also decreased from the past year's amount. One of the reasons for this decline can be spotted within the operational failures of FACT. Since fertilizers account for the major portion of cargo moved here and FACT being the supplier of the fertilizers, from the last year it has been rather dysfunctional. Having temporarily closed operations in January 2013, for development purposes, it has been unable to resume it up till now

4. Nationalization

Nationalization is the process of taking a private industry or private assets into public ownership by a national government or state. Nationalization usually refers to private assets, but may also mean assets owned by lower levels of government, such as municipalities, being transferred to the public sector to be operated and owned by the state. This could be the case for any sector, say Inland Water Transport or the Road Transport or even the Railways.

In Kerala there is no nationalization in the Inland Water Transport sector. However, there is not much private participation in it. The reason for the lack of private participation in the sector could be the lack in some government policies concerned to this sector or the private investors do not see any profitable perspectives in this sector. As far as construction and maintenance of infrastructure at the NW-3 is concerned then all the activities from the construction of terminals, to dredging, to other infrastructure is carried out solely by the government statutory body IWAI. It is the only operating body that undertakes activities like Dredging, construction of terminals, provision of night navigation facilities, widening of canals, maintaining the least available depth of the waters. The private investors cannot take part in these activities.

In spite of total Government control in these activities the results has not been satisfying. It has failed to maintain the required Least Available Depth (LAD) of 2m in certain parts. Also the infrastructure like the night navigation facilities provided by it has proven to be inadequate. And in case of complete nationalization, where no private player will be allowed to move cargo across the waters, there will not be any optimum utilization of the infrastructure that has been created.

The potential of the inland waters would go unutilized then. The cargo moved would be even lesser in that case. The local people of Kerala would not be allowed to use the waterways. It would prove to be a great loss for the fishermen of the region who manage their livelihood from these inland waters.

Private players are only allowed to invest in construction of vessels and carry out their movement across the NW-3. As it is, there is just one private player 'M/s Lots Shipping' in the cargo transporting sector on the NW-3. As far as passenger boats are concerned, then there is only government owned ferry boat services in this region. Private participation is limited to tourist boats only. There are about 300 privately owned tourist boats operating in the region.

On the other hand encouraging more and more participation from the private sector would really prove to be a boon for the sector. If there is private investment in this sector, quality standards in the operations will be ensured. It is not only in moving cargo but private investment should also be encouraged in the maintenance of the waterways.

This means that any private player interested in the operation of passenger boats has to first approach the Cochin Port Trust and obtain permission for the same and also get his firm and his vessels licensed as under the Kerala Inland Vessel Rules 2010.

5. The Issues with Private Investment in India

The key issues here are investments in national waterways and associated infrastructure. The proportion of traffic carried by IWT is very small. One of the reasons is the development of road and rail traffic, which have become very viable modes of transport. But a case can also be made that investment in the IWT sector has been small, compared to the other two. Worldwide experience suggests that strategic investments in some modes of transport can impact shares of movement significantly and with the resulting impact on overall costs and competitiveness. In this context, IWT can be examined, at least for selective enhancement of the sector.

The general principle of investment by the government in such sectors is that it concerns those facilities and operations which go outside a normal commercial domain. Large investments with long term impact and which are likely to be used by numerous commercial entities are candidates for government participation. River training, including dredging, mapping of the river and providing navigational support are some tasks in this domain.

Tasks such as terminal construction and operation are viable for private participation where appropriate. The operations in Goa indicate that the private sector has the capability and will to invest in barge ownership, operation and supporting services such as barge building, maintenance and repair.

A significant facilitator is the terminal facility for handling iron ore at Mormugao Port. At Mormugao also, there is private operation of some berths and coal handling and dry dock repair operations already.

5.1 Width of the waterways

The width of the NW-3 is insufficient for large barges in places like the Udyogmandal Canal and the Champakkara Canal. It causes difficulty for high-capacity barges to move safely through them. The Government should make provisions to maintain a feasible width throughout the year for the smooth movement of cargo through these canals.

5.2 Non-availability of Cargo

One of the major reasons for the under development of the NW-3 and the lack of private sector participation is the lack of cargo. There are only two cargo suppliers in the region, namely FACT and Cominco Binani Zinc Limited. Hence, the potential investors are unsure about adequate returns in the business due to lack of cargo. Secondly FACT a major cargo supplier in Cochin is not operating since the last 5 months due to some internal operational issues in the company.

5.3 Huge Investment involved

Private owners in order to invest in the IWT sector have to invest huge sums of money as the construction of a single medium-capacity barge costs about 3-4 crores. Initially the Government would provide them with a subsidy of 30% in Construction of vessels but now there is no such provision.

6. Solutions

6.1 Integration of coastal shipping with Inland water Transport

There is potential for integration of coastal shipping with Inland water Transport and thereby to enhance its share in the total transport system of the country. The seamless integration of the coastal shipping and inland water transport can be effective only when the vessels can operate in both the sectors economically.

The availability of inadequate water depth in the inland waterways may have certain disadvantages for design and construction for an optimum designed vessel.

But it is expected that with further development of the water ways and relaxation in the requirement of coastal shipping for operation in the coastal waterways along with the same

gesture by the classification society considering limited operation of the vessel in coastal waterways maintaining a balance with respect to safety and economy.

6.2 Actively Supporting Self-employed Water Transportation Labour

In China this was one of the major steps that resulted in a prosperous and vast network of Inland Water Transport. All ports, wharves, and loading and unloading, repairing, lock, winching and communication facilities be opened to self-employed water transportation labor, that self-employed water transportation labor should be allowed to find sources of freight and set up prices by themselves for short-distance transportation, and that township enterprises and farmers be supported in collecting funds for the construction of ports and wharves and regulation of small rivers and tributaries. The circular should also encourage self-employed water transportation labor to cooperate with water and land transportation enterprises in various forms, and to combine transportation with production and marketing.

6.3 Actively Developing Economic Alliances in IWT

The demand for transportation has increased, in this new situation, IWT departments should break the rigid boundaries of different regions, different departments and different trades, go in for various forms of economic alliance, and achieve significant economic and social benefits. In IWT economic alliances can take the following forms:

- Alliance of different transportation: It includes main stream-tributary coordinated transport, river-and-sea coordinated transport, water-and-railway coordinated transport, water and highway coordinated transport, port-to-port coordinated container transport.
- Alliance of different trades
- Coordinated passenger transport and extended service: Citing China's example again, The Passenger Transport Station of the Wuhan Port and the Changjian Group Corporation coordinates with the tourist companies or shipping companies in Sichuan, Jiangxi, Anhui, Hunan, etc. in tourism, providing services in board and loading, transport and tourism. The Fuling Shipping Company of Sichuan Province has established links with Chongqing Railway Station and some bus transport companies, selling train tickets and bus tickets for them, and Chongqing Railway Station and the bus transport companies sell boat tickets for it. The Dongzhi Shipping Company of Anhui Province has such facilities as ferry boats, buses, hotel, restaurant, and department store, thereby providing various services. The passengers enjoy the conveniences it provides.

6.4 Allowing Private participation in maintenance of waterways

The government should allow private players to invest even in the maintenance of waterways and construction of terminals. In this manner greater funds will be invested in the infrastructure and will induce more cargo operators to opt for Inland Water transport. At present only the IWAI undertakes such projects. Whereas if it gives out certain projects to potential private investors it will insure a better infrastructure and maintenance.

6.5 Reviving the subsidy plan

Earlier it was the government policy to provide 30% subsidy to private investors in the construction of barges. Now however this policy has been scrapped. The government no longer subsidizes the construction of vessels. This policy should be revived in order to attract more and more private investors.

6.6 Encouraging Multi-Modal transport

Multi-modal transport is a very interesting approach that solves a large part of cargo mobility problems. Combining private and state transport in a multi-modal transport system offers the opportunity to capitalize the best rates and transit time as possible. Multi-modal transport could remove the barrier of last mile connectivity in Kerala. One owner could operate the movement of cargo by using more than one mode of transport.

Conclusion

In the above study the advantages of IWT over other modes and the crisis that it is facing in India, particular to Kerala has been reviewed. The IWT also showed favorable advantages over road or rail transport existing in the country. The analysis of coastal cargo movements in India shows that the utilization of Inland waterways in India is minuscule compared to European Union or neighboring countries like China. It gives a clear picture of inefficient handling of Indian ports which not only discourages the Inland Water Transport but also the whole maritime trade. In Kerala however, the major issues that are faced by IWT are those relating to infrastructure or maintenance of the Inland Waterways. Kerala has a rough geographical terrain and a distinct climate. Coping up with these factors will require a humungous amount of effort from both the government. and the private sector. Private investment is necessary in this sector to ensure more funds and more participation by making the most of the Inland Waterways. This sector will best function and develop if kept open for private investment.

Due to the opening up of the Indian economy and its fast growth GDP, there has been an urgent need for efficient transport system in a large scale for movement of bulk goods for providing the infrastructure to the power sector, distribution of food grain, fertilizers, construction material, Petroleum, oil and Lubricants, Over-Dimensional Consignments, etc. Rail and Road, modes are already over burdened, and congested. Their expansion requires huge capital investment, time, a lot of land acquisition making it very often a difficult proposition. Hence, a need has arisen for the development as well as integration of both coastal shipping and inland water transport. There is potential for integration of coastal shipping with Inland water Transport and thereby to enhance its share in the total transport system of the country. The seamless integration of the coastal shipping and inland water transport can be effective only when the vessels can operate in both the sectors economically. The availability of inadequate water depth in the inland waterways may have certain disadvantages for design and construction for an optimum designed vessel.

References

- MOS, 2001. *Inland Water Transport Policy*, Ministry of Shipping, Government of India, New Delhi,
- MOLJ, 1986. *The Inland Vessels Act, 1917*, Ministry of Law and Justice, Government of India, New Delhi
- MOLJCA, 1985. *Inland Waterways Authority of India Act*, Ministry of Law, Justice and Company Affairs, Government of India, New Delhi.
- Planning Commission, 2011. *Report of the Working Group on Inland Water Transport*, Sr. No 9/2001, New Delhi.
- Raghuram G, 2004. *Integrating Coastal Shipping with National Transport Network in India*, Proceedings of the International Association of Maritime Economists, Annual Conference 2004, vol. II, School of Maritime Business and Management, Dokuz Eylul Publications, Izmir, 2004
- Raghuram G and Rangaraj, Narayan, 2005. *Systems Perspectives on Inland Water Transport for Freight Movement*, presented at the 37th annual meeting of the Operational Research Society of India, Ahmedabad, January 8-11, 2005.
- *Inland Waterways Authority of India Rules*, 1986, Ministry of Surface Transport, Government of India, New Delhi.
- Sriraman S, 1998. *Inland Water Transport in India: Issues and Prospects*, Asian Transport Journal, Asian Institute of Transport Development, New Delhi, June 1998.

- Director General (DG) of Shipping (2010), *TCS report on Indian Coastal Shipping* Available from :<http://www.dgshipping.com/dgship/final/tcsrep/Default.htm>
- Sriraman,S. D. (2010). *Long Term Perspectives on Inland Transport in India. RITES Journal.*
- TCS (2003), *Research report of Tata Consultancy services on Indian coastal shipping*
- <http://www.dgshipping.com/dgship/final/tcsrep/Default.htm>.
- Inland Waterways Authority of India (2009), *Paper presented in the seminar conducted by institute of marine engineers at Cochin, India.*
- iwai.nic.in/paperonseccumrivervesseldt161209hq.pdf
- International Journal of research in Computer Application and Management. www.ijrcm.org.in
- State Planning Board, Thiruvananthpuram, October 2011, 12th Five-year Plan approach paper.
- Mid-term appraisal, eleventh five-year plan, 2007-2012, Planning Commission, Government of India.
- Regulations on cargo and traffic on Inland Waterways, Inland waterways Authority of India: www.iwai.nic.in.
- Paper on Operational difficulties of coastal vessels and its potential by S. Dandapat in the seminar conducted by Institute of Marine engineers, Kochi.
- Kerala Inland vessel rules2010, Government of Kerala.
- Position Paper on ports sector in India, December 2009, Department of Economic Affairs, Ministry of Finance, Government of India.