

Water Transport (1)

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Water is used for transportation purposes' since time immemorial. River and Oceans/Sea are still being use for the purposes. Waterway becomes cheapest mode of transportation when (ocean) water plays an obstacle especially for heavy and bulky goods to be transported in bulk for thousands of kms between producers and consumers. The loading and unloading of goods becomes easier as containers are being used in large numbers these days. The speeds of ships are comparatively slow but now a day these are facilitated with refrigeration room/equipment/part to conserve perishable goods or items. Modern ships are equipped with radar, wireless, GPS and other latest technologies for safe shipping and more efficient. The ocean/water transport contains low line- haul costs, readymade interconnected route, little friction resulted into low fuel costs and can carries a load up to 5 lakh tons. International and domestic transports are the two basic types of such transport.

International Transport- *Lakes, rivers and oceans play very important role in International trade and transport. Some International water transport routes are very popular and even*

very busy too. Most of the ships these days follow the pre-defined routes, ports, and time. These ships try to follow the **Great Circle Route** to travel minimum distance but practically they shifted their route in accordance with passengers, goods, climate/weather and fuel centers. Some international route are defined through which ships covers their international movement. For loading of fuel and loading and unloading of goods and passengers, stations i.e. Ports have been constructed and developed at the sea coast. These ports are well connected through the other means of transport to serve their hinterland.

Water transport needs some basic factors or in other words- there are some factors which influence the water transport. They are:

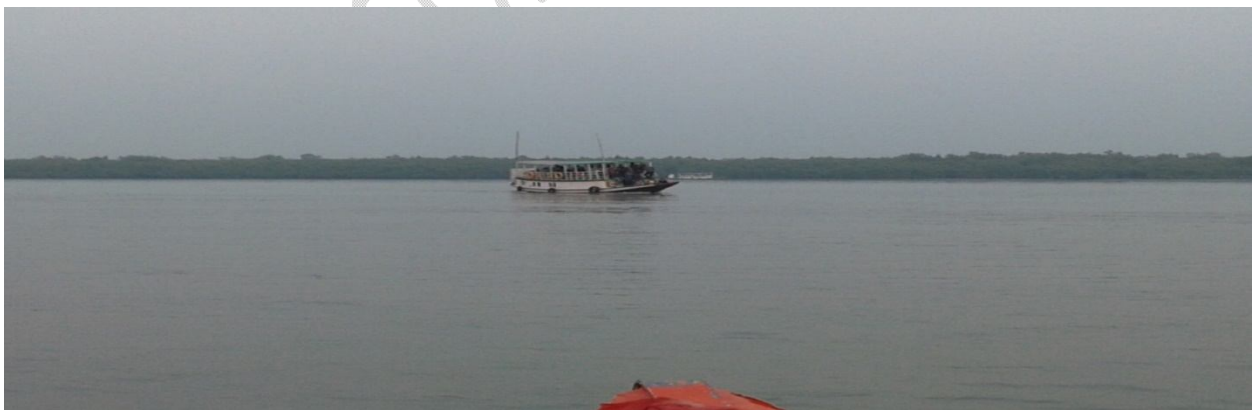
1. Depth of water should be uniform in the entire water body concerned throughout the year. So that ships can move easily throughout the year.
2. Water body should be free from iceberg effect.
3. The flow of water should be gentle. It should not be very fast or very slow because Ship takes more time to travel in such types of flow.
4. The route should be free from waterfall, rapids, hard rocks and narrow valleys.
5. The route should be straight and not very zigzag. If there is zigzag route than it should be converted into straight route before the Commencement of the route.
6. The water transport route follows the passengers as well as Goods and fuel availability.
7. Hinterland of the water route stations i.e. ports should be rich in industrial and trade sense.
8. The water transport route must be free from marshy and swampy region.

According to E.L.Ullman, there are three basic factors-complementarity, intervening opportunity and transferability, which affect the interaction between regions for transportation. On the availability of such facilities water transport are categorizes into three types.

a- Inland waterways

b- Canal waterways and

c- Oceanic /sea waterways



Water Transport at Sunderban



IMPORTANT WATER TRANSPORT ROUTES

- 1. North Atlantic Ocean Route** – North Atlantic Ocean route is also known as Big Trunk Route, which connects the North American countries with European countries.
- 2. South Atlantic Ocean Route** - South Atlantic Ocean Route is mainly developed among Eastern South American countries, European, Eastern North American countries.
- 3. Suez Canal Route** –Suez Canal route connects Red Sea with Mediterranean Sea. **Port Said** is an important port on Mediterranean Sea while **Port Suez** is on another side. Suez Canal route offers shortest distance for international trade route between India-Europe and Eastern African countries-Europe. The route is 160 kms long and 11-15 meter deep.
- 4. Panama Canal Route** – Panama Canal connects Atlantic Ocean (**Port Cologne**) with Pacific Ocean (**Port Panama**).The route is 80 kms long and has reduced the distance of 13000 kms between Eastern U.S.A. (New York) and Western U.S.A. (San Francisco). There are six (6) Lock Systems in the canal which help ships to cross/pass the canal.

5. **Cape of Good Hope Route** – Cape of Good Hope route played an important role in international trade before the commencement of Suez Canal. Still Cape of Good Hope offers trade route between Australia, South East Asian Countries, African countries and Eastern North American Countries. Eastern African countries follow this route for the trade with Western African countries.

6. **Mediterranean-Indian Ocean Route** – International trade between India, Sri Lanka and Western and Southern European countries is made possible with shortest distance by Mediterranean-Indian Ocean route.

7. **North Pacific Route** – East Asian and Western North American countries follows the North Pacific route for their international trade. On this route HONO-LULU works as a fuel port. Some ships go directly to Vancouver from Yakohama and vice-versa.

8. **South Pacific Route** – Many South Asian countries, Australia-New Zealand, Canada, North American and Western European countries follows South Pacific route for their international trade.

9. **Great Lakes-St. Laurence Waterways** (Canada-U.S.A.)- Connects Superior-Huron-Erie-Ontario lakes by Soo Canal and Walland Canal. Due to St. Laurence river transportation is possible between Canada and U.S.A.

10. **Mississippi-Ohio Waterways** (North America)-It connects interior U.S.A. with Gulf of Mexico.

11. **Rhine Waterways** (Europe)-It connects Basel of Switzerland to Rotterdam of Netherland. It is the world busiest commercial river as it offers very industrialized regions to its both sides.

12. **Danube Waterways** (Europe)-It connects Black Sea to Mediterranean Sea and Atlantic Sea through Rhone and Rhine Canal.

13. **Kiel Canal Route** (Europe)-It connects mouth of Elbe River to Baltic Sea.

14. **Volga Waterways** (Russia)-Volga canal system is the connecting link among Baltic Sea, White Sea, Caspian Sea, Black Sea and Azores Sea.

15. **Parana-Paraguay Waterways** (South America)-It serves the international trade of South American countries through Parana-Paraguay Rivers. Big Ships from Atlantic Ocean enters up to Santa Fe and small ships up to Anansean (Paraguay).

1. NORTH ATLANTIC TRADE ROUTE

North Atlantic Trade route is one of the prominent sea routes with commercial importance. Most of the major sea routes comes to an end at its eastern boundary i.e.-Western Europe, which is the most industrialized region of the world. The region accounts the maximum imports of raw materials and export of finished goods.

The North Atlantic sea route is extended from Mediterranean Sea and Western Europe to the eastern margin of North America. On this sea route, the ship generally does not follow the Great Circle Route due to—

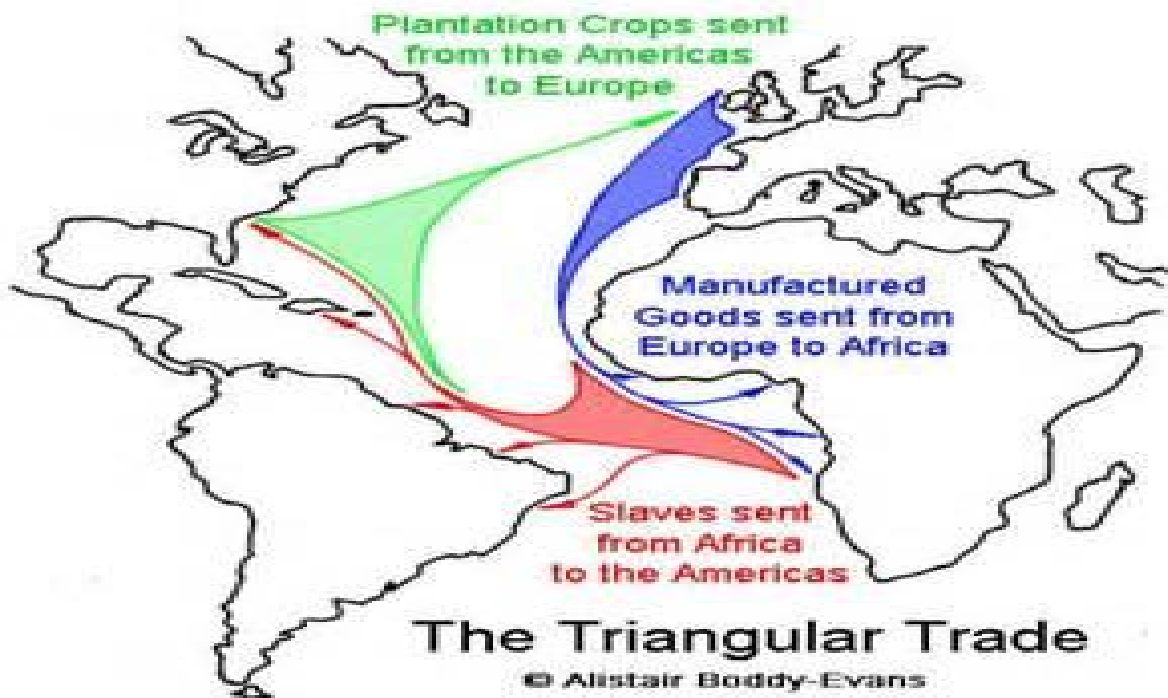
1. There is shallow water in the northern part of the route.
2. Dense foggy condition prevails near the Newfoundland region where warm Gulf Stream meets with cold Labrador Current.
3. The coral reefs are found abundantly near the Grand Bank.

4. Icebergs often come from the western part of Greenland to this route and damage the ships.
5. Severe cyclonic conditions are found during the winter season to the northern part of the route.
6. Labrador Peninsula is projected towards the ocean.
7. There are differences found among the parts of the route.

Due to the reason, the ships shifted 2.5° souths to the true Great Circle Route on this sea route.

The North Atlantic Sea Route is geographically found between 40° North and 50° North latitudes and takes the circular shape towards north. It is highly suitable and safe sea route due to absence of submerged islands and rocks. On the other hand, the dense foggy condition creates a very horrible situation. Therefore, the ship generally tries to leave the region and hence they cover some lengthy route.

Besides all these problems the ships of this route transports the goods to Central America, Mexico, Gulf of western island groups, New Orleans and up to New York. The sea route lies between two large and rich continent. Petroleum is important in the west while coal is in the eastern side. The route is popularly known as **Triangular Trade Route** as Slave sent from Africa to the America, plantation crops sent from the Americas to Europe and finally manufactured goods sent from Europe to Africa.

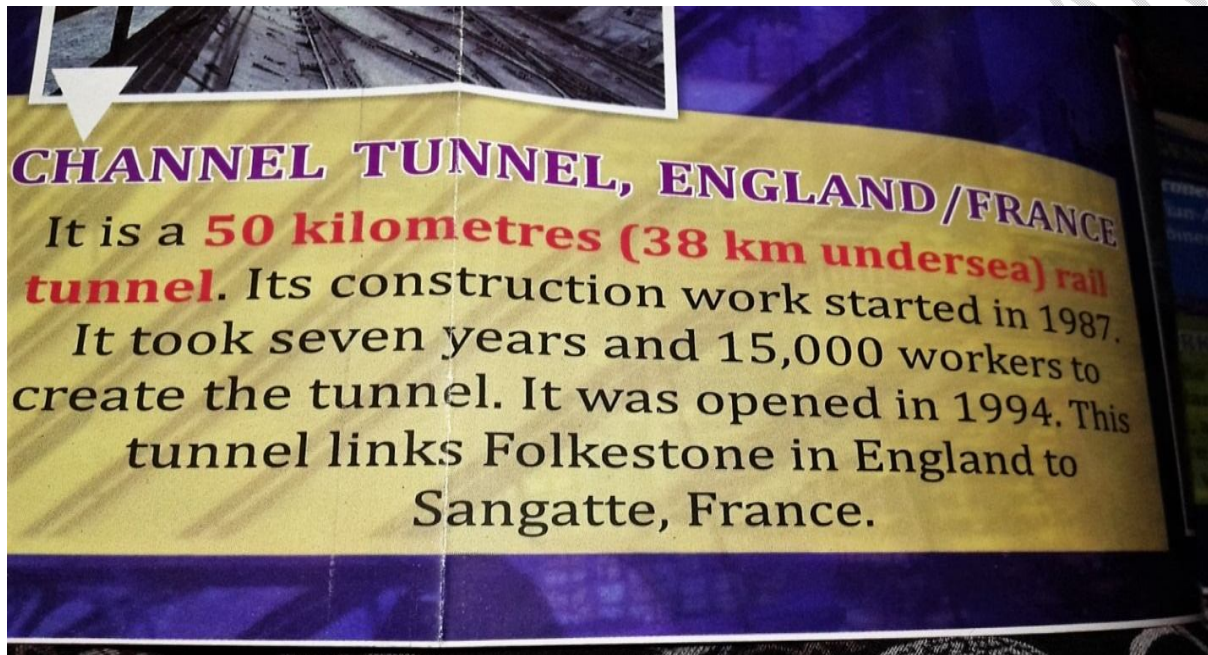


Source: Internet

Name of the major ports on the sea route:

The North Atlantic sea route covers some developed areas of the world. So, numbers of ports are available on the route. Galveston, New Orleans, Charleston, Baltimore, Philadelphia, New York, Boston, Halifax, St. Jones, Quebec and Montreal are major ports on western coast (America side) whereas Glasgow, Manchester, Liverpool, Southampton, London, Virgin, Leningrad, Hamburg, Bremen, Amsterdam, Rotterdam, Hague, Lisbon, Rome, Naples and Venice are

major ports on eastern coast(Britain side). The hinterlands of these ports are very rich and highly developed. Besides this, channels of navigable rivers and canals, rail and road transportation network has led to the industrial development of the region. About 25% goods of the world's trade and transported goods are carrying on this route .About 50% of the world's total ship passengers travels on this route.



Trade:

Cereals, timber, paper, pulp, cream, rail-items, copper, zinc, silver, potash, uranium, aluminum are the important items of trade from Canada to North America. Wheat, cotton, soybeans, meat, iron steel, milk and milk products, machines and agricultural implements,

motor cars, petroleum, phosphate and apple are the important export items from U.S.A.

From Caribbean countries sugar, fruits, petroleum, kerosene and timber are the important export items. From European countries ,Pyrite from Spain, potash from Germany , gypsum from France, woolen textile and ceramics from Britain, paper, pulp and newspaper , timbers and other goods are major export items from Norway,Sweden and Scandinavia.

The North Atlantic Trade Route clears that raw materials , finished items and even cereals are the major trade items of the route but it is a remarkable fact that the items exported from North America to Europe is fivefold more than the items exported from the Europe to North America in terms of volume. The sea route accounts for the 1/4th of the total world trade. The importance began in 1938 and now about more than the ships of 300 companies sails on this route.

*Thanks***Water Transport**

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