

## Conference Paper

# The Role of River Transport for School Access

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**Abstract**

River transportation in Indonesia involves upstream and downstream travel, and river crossings. To be defined as navigable, a river must meet certain technical requirements, including depth, slope and current velocity. River transport plays a particularly important role in Indonesia's Kalimantan region, especially in areas where road transportation infrastructure is not yet available. This study uses a methodological approach and framework to consider the importance of river transport for schools access in the region.

**Keywords:** Transportation; School; River.

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Published: 12 January 2021

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Selection and Peer-review under the responsibility of the IWOSPA Conference Committee.

## 1. Introduction

Indonesia is an archipelagic country consisting of thousands of islands along the equator which ranks fourth of the 10 most populous countries in the world. (CIA World Factbook. (2013). (ilmu pengetahuan umum.com/10-negara-denganjumlah-penduduk-populasi-terbanyak-di-dunia/). Accepted on 18 oktober 2020) Without adequate transportation facilities, it will be difficult to connect all areas in this archipelago. Transportation is one sector of activity that is very important because it is related to everyone's needs. This need is, for example, the need to reach work locations, school locations, visit places of entertainment or services, and even to travel outside the city. Transportation is not only for transporting people, but also for moving goods from one place to another. (Sari, Rizki Permata. (2008). Pergeseran Pergerakan Angkutan Sungai di Sungai Martapura KotaBanjarmasin. Tesis. p. 1)

River and lake transportation plays a very important role in driving various activities, especially in remote areas that have many rivers, considering that the river transport vessels used are generally made of traditional wood without following applicable regulations, it is feared that the level of safety is not guaranteed, especially if the ship is used to transport passengers with the ship's negligence from a safety aspect. There are several things that need to be improved on the ship, including the strength of the ship's construction, the number of passengers and the completeness of safety

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equipment. In analyzing the strength of construction, it refers to the Indonesian classification regulations specifically for wooden ships, for the number of passengers and the completeness of safety equipment, refer to the regulations for the safety of river and lake transportation, and the stability of the ship using Maxsurf. Based on the results of the analysis, it is known that the longitudinal construction of the ship needs additional strength, the stability of the ship is good enough, the number of passengers needs to be reduced, and the ship needs to be equipped with a number of safety equipment.

The importance of the role of transportation will be reflected in the implementation of the role and function of transportation itself which affects all aspects of the life of the nation and state as well as the increasing need for transportation services for the mobility of people and domestic goods. In addition, transportation also plays a role as support, impetus and driving force for the growth of regions that have large but undeveloped natural resource potential.

The development of transportation allows various activities to be transported by land, air or sea with various types of transport. However, it should be remembered, that as a facility to support life activities, transportation development must be calculated precisely and as carefully as possible in order to support the general development goals of one area.

## 2. Research Methods

A research requires a methodology, because methodology is an approach framework with scientific thinking patterns. This means that research has scientific characteristics that are rational (carried out in ways that make sense, so that human reasoning can reach it), empirical (methods used in research are observed by the human senses), and systematic (the process used uses steps that are make sense. (Sugiyono. (2006). Statistik untuk Penelitian. Bandung: Alfabeta. p.20) Nazir suggested that the research method is a unitary system consisting of procedures and techniques that need to be carried out in a study. Procedures provide researchers with work sequences that must be done in a study. (Nazir, M. (2003). Metode Penelitian. Jakarta: Ghalia Indonesia. p.11)

## 3. Results and Discussion

The modes or types of transportation can be grouped according to the media or place where the movement is carried out, namely land transportation (road transportation,

railways, rivers, lakes, crossings, pipes and cable cars), sea transportation, and air transportation. (Kodoatie & Robert J. (2005). Pengantar Manajemen Infrastruktur. Yogyakarta: Pustaka pelajar. p.22) Most of the movements are usually not served by a single mode, but involve two or more modes. The choice of mode of transportation by a region needs to pay attention to the economic characteristics of each mode, its adaptability to the types and varieties, volume of traffic of goods or passengers served, and natural conditions, because it will also affect construction costs and costs. Operation of the mode of transportation to be built. (Nasution, M Nur. (2004). Manajemen Transportasi (Edisi Kedua). Jakarta: Ghalia Indonesia. p.12) A transportation is said to be good, if the first time the trip is fast enough, it doesn't experience traffic jams. Second, the frequency of service is sufficient. Third, safe and comfortable service conditions. To achieve such ideal conditions is very much determined by various factors that become components of transportation, namely the condition of the infrastructure and its network system, the condition of the facilities, and what is no less important is the mental attitude of the users of the transportation facilities themselves. (Sinulingga & Budi D. (2005). Pembangunan Kota: Tinjauan Regional dan Lokal. Jakarta: Pustaka Sinar Harapan. P.15)

River transportation in Indonesia is generally used to serve the mobility of goods and passengers, both along river flows and river crossings. A navigable river water system must meet the technical requirements, namely: a certain depth, slope and current velocity, so that it is safe and navigable. River transport is very prominent in Kalimantan, Sumatra and Papua. In Kalimantan, river transportation is widely used for local and urban transportation needs, especially in areas where road transportation infrastructure is not yet available.

In historical perspective, river transportation / water transportation has been known since the time our ancestors worked as sailors for thousands of years. Indonesia has long been known as one of the most famous "boat nations". This can be proven in relief images in the form of boats in Borobudur, Perambanan temple and several other temples. (Lisbijanto. (2013). Kapal Pinisi. Yogyakarta: Graha Ilmu. p.7)

Some people say that our ancestors built boats with only a simple ability, namely linking several bamboo sticks together, which became known as a raft or *gethek*. However, this raft can only be used for short distance voyages and is only suitable for sailing on rivers where there are no waves. The shape of the raft is the simplest form of the boat, without a rudder and sails.

Another possibility is that our ancestors, long before they knew the boat, still used banana tree trunks which were attached to ropes or trunks and used for short voyages and river areas without waves. These two types of simple boats are still used by residents

in rural areas and inland. (Ibid)Indonesia as an archipelagic country and has diverse cultures and ethnicities, so there are various types of boats according to the customs and traditions of each region. Types of boats known in Indonesia include boat, *biduk*, *bidar*, *kora-kora*, *klotok*, *ketingting*, *pancalang*, *lancing*, *kalulus*, *bahtera*, *barge*, *janggolan*, *jung*, *palari*, *sandek*, *paduakang*, *orembai*, *rorehe*, *sope*, *balaso-e*, *sledding*, *canoe*, *lifeboat* and *kettle*. The shapes of the boats are also varied, some are plain, some are colorful with decorations or carvings and some have certain characteristics.

Transportation activities aim to meet human needs by creating benefits. Transportation is a type of activity that involves increasing human needs by changing the geographical location of people and goods. By transportation of raw materials, they are brought to the place of production and it is by transportation that the results of production are brought to the market or to the place of service for necessities.

Structural poverty is poverty caused by economic and political structural factors that surround the poor. Economic and political structures that do not take sides with certain groups of people, causing barriers to access to economic resources, employment opportunities and participation in development, including education. Education occupies a central position in development because the goal is to improve the quality of human resources, therefore education is also the middle flow of all development sectors. Development in relation to human resource development, which means that development is not merely material and physical development but also spiritual development and the success of development can be reflected in the economic or material side and also the spiritual side, which shows that the essence of development is based on and is based on the human side, with thus the ultimate goal of development is human. Humans as development capital cannot be separated from education so that education is one of the benchmarks in seeing development success.

The geographical condition of an area greatly influences the culture of a community in that area. People who live in remote areas will develop an agrarian culture. Likewise, people who live in coastal areas and island areas, of course, will have a maritime culture.

In urban areas, we are used to seeing school children enliven the bustle of the morning, using two-wheeled or four-wheeled vehicles to their place of study. However, the scene is much different when we visit small islands or the deepest places, especially where children fight for their lives crossing rivers or the sea.

After the children start to grow up, they start to worry because when they want to go to school or come home from school they have to cross the sea every day. *Demand knowledge up to China*. That's the saying we often hear so that we have enthusiasm for learning have to risk their lives just to reach school.

Every day the children want to study in elementary school, junior high school and senior high school, like it or not they have to pass the sea route by boat.

These boats have various functions and uses, for example a boat that serves to carry catches, carry merchandise, sports, transportation, cruise, maintain security, fight and other uses. There are still many school children who use river or water transportation to commute to school. It is possible that the area of these students, there is no road road to the school. In addition to crossing the river, students who still use water transportation, perhaps the area concerned also does not have road facilities to school. The *Kelotok* transportation for students, said Harun, is a means of transportation owned by the community, and not assistance from the local government.

This is not limited to maintaining their culture, but the ability of children to row canoes and cross the sea or river, as if it has become an obligation that must be done in order to make it easier for them to go to school, for the sake of studying. Geographical factors, land separated by sea or river, forces children around this island to have skills in boat mastering to get to school.

A number of students crossed the river by boat School is certainly a compulsory choice for children so that their quality of life is better than their parents or older siblings. Rowing the canoe was not something extraordinary, because it was so used to them. In fact, if children in the city are busy playing games on their gadgets, and watching cartoons or soap operas after school but something is more lacking, they are busy collecting shells or snails on the beach to be used as side dishes. The results of their collection can also be sold to help the family economy.

For them, cellphones are something that is rare. Even though their parents or siblings use cell phones, they are not as sophisticated as cellphones that can take pictures or access the internet. Away from the glamor of city life, the children are very observant of cultural customs. For them, education is number one, but not the least of the children around who do not finish primary school. There are still very few S1 winners. This fact is not a barrier, although we do not know whether to continue school later or not. However, the aspirations to complete education as high as possible can still be seen from their expressions and stories.

Not every time these children use canoes. During certain weather or strong wave season, their parents would deliver them on a bigger *Pompong* (a type of boat). However, during normal seasons, children on the island will be allowed to use canoes because if they continue to use *Pompong*, their parents' livelihoods will be disturbed.

The quality of human resources is determined, among other things, by the quality and level of education. The low quality of education causes the quality of human resources

to be low, the higher the level of education, the higher the quality of human resources. This affects the way of thinking, reasoning, insight, breadth and depth of knowledge. With a high level of education, it is hoped that it will be easier to get the opportunity to get a better job with a relatively higher income, and will automatically be able to maintain a relatively better health. And good health can only be obtained and improved if you have sufficient income, and finally a job with a sufficient income is determined by the level of education. The *Pompongs* used are private *Pompong* which are also used to fish in the sea or as a livelihood and income for their economy. The lives of these children are very different from the lives of children in cities. Their hopes and dreams must be risked with life and luck. The greatest treasure for them is to achieve the dream of realizing the highest education, because for them the achievement of completing nine years of school is already an extraordinary thing, especially if they are able to reach the tertiary level.

### 3.1. The Role of Transportation

The role of transportation is a process that aims to develop transportation to avoid problems and prevent problems that were predicted beforehand, and to utilize the existing system so that it allows people and goods to move / move places safely and cheaply, and if necessary or possible quickly and comfortable. (Ibid)

In accordance with government regulations, what is meant by river transportation is (Minister of Transportation Decree. (2004). No. 73):

1. River transportation is a transportation activity using ships carried on rivers, swamps, rigs, canals and canals to transport passengers, goods and / or animals which is carried out by river and lake transportation entrepreneurs;
2. River ships are ships equipped with motorized or non-motorized means of moving rivers and lakes;
3. River transportation routes, hereinafter referred to as routes, are routes for river and lake public transport services that have a fixed origin and destination, a fixed route and a fixed or unscheduled schedule;
4. Fixed and regular routes are transportation services carried out in a regular and regular route network, with a fixed or unscheduled schedule;

River shipping operations are carried out for the following purposes: (Minister of Transportation Regulation (2012). No. 52)

1. Orderliness of river and lake boat traffic;
2. Monitor the movement of river and lake vessels; and
3. Directing the movement of river and lake ships The administration of river shipping is carried out by the government and the following are stipulated for the operation of river shipping channels:
  - (a) Navigation;
  - (b) Route system;
  - (c) Traffic procedures; and
  - (d) The berthing area of the ship is in accordance with its interests.

### 3.2. River Transportation Network

The river transportation network includes river transportation channels and docks. Meanwhile, what is meant by river transportation flow is:

1. River Sailing is the waters of rivers and lakes, river estuaries, channels that connect 2 (two) or more river estuaries which constitute a single unit of river and lake shipping lanes which in terms of depth, width and other shipping barriers are deemed safe and secure. to navigate.
2. River Port is a port used to serve river transportation located on rivers.
3. River cruise facilities are facilities and infrastructure that must be equipped to ensure the safety, security, order and smoothness of traffic and transportation on a shipping lane.
4. A stop is a facility in the form of a temporary stop to pick up and drop off passengers and goods between the ports of origin and destination.

Based on its function, river transportation channels are classified as primary channels, secondary channels and local channels. The primary channel serves the main inter-city or regency river traffic. The secondary channel serves the collecting river traffic from and to the area within the city. Meanwhile, local channels serve river traffic within the area. River transportation is greatly influenced by the existence of rivers in the area.

Boat is a means of transportation for humans who are on the coast or along rivers, lakes, or beaches. To move the boat using human power regularly and together so as to be able to carry the boat between 2 to 20 people. Judging from the function of the boat

as a means of water transportation to get to a place that has been used for thousands of years. Boats are also often a symbol by various ethnic tribes in the archipelago. They even become part of the cultural element and boats are made part of their life.

Therefore, the function or existence of boats is very important for human life, especially those around the waters. From its shape, making boats is simpler than making other means of transportation. Generally made of wood in the form of an overdraft or hollow from a tree trunk that is carved in the middle so that it becomes an open cavity on the upper side, thus the tree trunk will then be able to float and be boarded by humans on it.

These boats have various functions and uses, for example a boat that serves to carry catches, carry merchandise, sports, transportation, cruise, maintain security, fight and other uses.

**Ship Stability** Various types of ship accidents that have an impact on the poor performance of marine transportation safety are inseparable from failures that arise both during the construction stage and during the operation process. From several cases of ship accidents, it is known that the tragedy that befell ships is generally caused by the ship losing its stability. Stability of a ship can be defined as the balance of the ship's movement in the transverse direction or the ability of the ship to return to its upright state after experiencing which, among others, is caused by external and internal influences. Provisions regarding ship stability, especially for ships sailing in sea waters, refer to the 1993 IMO regulations.

Appealing to the public, especially students who are still using water / river transportation, to always be careful and always pay attention to the conditions of the *Kelotok* and the passenger capacity to be adjusted so as not to overcapacity.

*"The problem is the difference between a Kelotok and a person carrying the goods, because humans can move around, so the condition of the Kelotok is unstable, it is different from transporting goods".*

Each month the *Kelotok* is used as public transportation, there must be a check from his side regarding the feasibility of the *Kelotok* concerned for operation. Actually, based on the rules, a wooden *Kelotok* has a maximum strength of 5 years. That's why the Transportation Agency does not recommend this type of *Kelotok* public transportation, which is more than five years old. The boat is a means of transportation for students to leave and return. This is the sad portrait of education in Indonesia, there are still obstacles for people in remote areas to get government education to act immediately so that students do not lose their enthusiasm for studying.



Regardless of the current state of national education, the most important thing is public awareness of the importance of education and the government's commitment to ensuring the fulfillment of the educational needs of every citizen as guaranteed in the 1945 Constitution Article 31 paragraph (1), namely that every citizen has the right get learning that the right to education for every citizen has been guaranteed by certain and binding laws. (UUD 1945 Article 31 paragraph (1)) This means that neither party may hinder or obstruct one's intention to learn and gain learning.

In the Convention on the Rights of the Child, which has been ratified by the Indonesian government, it has actually been stated and recognized that children are essentially entitled to obtain a proper education and they should not be involved in early economic activities. However, due to poverty pressures, lack of parental interest in the importance of education and a number of other factors, children voluntarily or forcibly become an important source of family income. In terms of education, working children tend to easily drop out of school, either dropping out of school because they work first or dropping out of school and then working. For school children and work is a double burden which is often considered too heavy, so that after adding economic pressure and other structural factors.

#### 4. Conclusion

River transportation in Indonesia is generally used to serve the mobility of goods and passengers, both along river flows and river crossings. A navigable river water system must meet the technical requirements, namely: a certain depth, slope and current velocity, so that it is safe and navigable. There are still many school children who use river or water transportation to commute to school. It is possible that the area of these students, there is no road road to the school. In addition to crossing the river, students who still use water transportation, perhaps the area concerned also does not have road facilities to school. A number of students crossed the river by boat school is certainly a compulsory choice for children so that their quality of life is better than their parents or their siblings rowing a canoe is not something extraordinary, because it has become commonplace for them.

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