



# Performance Evaluation Of Bastiong Ferry Port, North Maluku Province

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**Abstract.** Bastiong Ferry Port is a ferry port in the working area of BPTD Class II North Maluku which is located in North Maluku Province, Bastiong Ferry Port is a port that connects the surrounding islands. In an effort to ensure smooth operations and the comfort of service users, maximum facilities and services are needed. However, several basic and supporting facilities of the ferry port have not been optimal or are not fully utilized, or even there are no such facilities. This study aims to determine the performance value of the Bastiong ferry port by referring to the Decree of the Directorate General of Land Transportation Number KP-DRJD 539 of 2022 concerning guidelines for planning, development and evaluation of the performance of river, lake and ferry ports. The methods used include observation, calculation, and documentation which are analyzed for suitability based on the survey form that is already in the regulations. Based on the research results, it was found that the Bastiong ferry port has aspects that have not been maximized, some of which are in the service performance aspect, namely the problem of ship delays, operational performance of vehicle queues, and supporting performance of the lack of existing port facilities, such as evacuation route signs. Therefore, evaluation and completion of facilities are needed to improve services and also the comfort of service users. The efforts needed include building waste disposal facilities and fuel storage (bunkers) in the port area, appeals to service users and disseminating information related to ship departures and arrivals, and affirmation of regulations to ship operators in terms of maneuvering and loading and unloading. All of this aims to improve port performance for the comfort of service users, ship operators, and port operators in the Bastiong ferry port area.

**Keywords:** Evaluation, Performance, Ferry Port.

## 1. INTRODUCTION

Indonesia is one of the largest archipelagic countries in the world. There are 17,499 islands in Indonesia with a total area of approximately 7.81 million km<sup>2</sup>. Of the total area, 3.25 million km<sup>2</sup> is ocean and 2.55 million km<sup>2</sup> is the Exclusive Economic Zone. (Kemenkumham RI, 2015). With such a large area of water, the role of river, lake and ferry transportation services is very important in accordance with the geographical

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characteristics of Indonesia as an archipelagic country. As an archipelagic country, of course, Indonesia's population, natural resources, and economic strength are spread across various regions (islands), so that it requires connecting facilities, one of which is river, lake and ferry transportation. (Mamahit, B, 2012)

A good ferry port certainly has maximum performance indicators and meets the specified standards, so measuring the performance indicators of existing ports needs to be done to achieve maximum ferry port performance and meet the standards. Port performance indicators are guided by the Decree of the Director General of Land Transportation Number: KP-DRJD 539 of 2022 concerning Guidelines for Planning, Development, and Performance Evaluation of River, Lake, and Ferry Ports.

During the observation at the Bastiong ferry port, it was found that the Bastiong ferry port is a class I port, which is determined in PM 432 of 2017, but there are several indicators of port performance aspects that are not maximized, namely in the aspect of service performance in the form of ship delays, operational performance in the form of vehicle queue problems, and supporting performance in the form of a lack of existing port facilities such as evacuation route signs. Guided by the regulations issued KP-DRJD 539 of 2022 Concerning Guidelines for Planning, Development and Performance Evaluation of River, Lake and Ferry Ports, the author intends to be able to find out the assessment of port performance and evaluate the performance of the Ferry Port at Bastiong Port. Port performance needs to be evaluated periodically so that port services run effectively and efficiently which has an impact on increasing the mobility of the community served. Based on the problems described above, the author intends to conduct research in order to obtain the results of the port performance evaluation, so the author takes the title "Performance Evaluation of Bastiong Ferry Port, North Maluku Province".

## **2. RESEARCH METHOD**

The research method used in this study is a type of quantitative research method. Quantitative research only measures the level of a variable in a population or sample. Quantitative research obtains results by using data in the form of numbers as a tool to analyze information about what is wanted to be known. This study uses instruments in data collection in the form of survey forms and questionnaire forms that have been stated in the Decree of the Directorate General of Land Transportation Number: KP. DRJD 539 of 2022 as a primary data collector and institutional methods for secondary data taken from various agencies related to the management of the Bastiong Ferry Port. Furthermore, the data obtained is processed using the formula for each indicator contained in the regulation to produce a point value for the port performance assessment indicator. The points obtained are then processed by calculating the assessment weight and categorized based on the total accumulated value of the port performance assessment.

## **3. RESULT AND DISCUSSION**

### **3.1 Port Performance Assessment Aspects**

In order to create transportation facilities that prioritize operational smoothness and user comfort, a Performance Aspect Assessment of the Bastiong Ferry Port is required based on the Decree of the Directorate General of Land Transportation Number KP. DRJD 539 of 2022 which can be seen in the following table:

Table1 Performance Assessment Aspects of Bastiong Ferry Port

ASPECT	FACTOR		INDICATOR	
I. Service Performance Aspects	1.	Number of customers	a.	Development of the number of vehicles
			b.	Development of the number of passengers
			c.	Development of the number of ships
	2.	Satisfaction index Customer	a.	Customer satisfaction of vehicle carriers
			b.	Pedestrian customer satisfaction
			c.	Ship operator customer satisfaction
II. Operational Performance Aspects	1.	Ship operational service performance	a.	Maneuver time
	2.	Operational service performance for loading/unloading vehicles	a.	Average time for vehicles to board ship
			b.	Average time for vehicles to disembark from the ship
			c.	Time to queue for vehicles to board the ship
	3.	Operational service performance on facility utilization	a.	Berth Usage Level Occupancy Ratio (BOR)
	III. Supporting Performance Aspects	1.	Technical Development Plan Ferry Transportation Port	a.
b.				Implementation of the action plan contained in the planning document
2.		Port service systems and procedures	a.	Port service systems and procedures
			b.	Implementation of zoning system at the Port
			c.	Integrated information system technology for ferry port services and operations
3.		Port Facilities	a.	Basic port facilities
			b.	Port supporting facilities
4.		Service standards	a.	Passenger Service Standards at the Port
			b.	Vehicle Service Standards at the Port
			c.	Ship Service Standards in Harbor

ASPECT	FACTOR		INDICATOR	
	5.	Human Resources	a.	Availability of human resources
			b.	HR Competence

### 3.2 Data analysis

Based on the performance analysis of the Bastiong ferry port, the performance value of the Ferry Port was obtained in accordance with the Decree of the Directorate General of Land Transportation Number KP. DRDJ 539 of 2022 with the results that can be seen in the following table:

Table 2 results of the performance value analysis of Bastiong Ferry Port

No	Indicator	Weight Value	Weight	Performance Value	Performance Value/ (aspect)
		(1)	(2)	(1) x (2)	
<b>Service Performance Aspects</b>					
1	Development of the number of vehicles	75	0.024	1.8	77.8 (Weight 11.2)
2	Development of the number of passengers	75	0.024	1.8	
3	Development of the number of ships	75	0.024	1.8	
4	Customer Satisfaction of vehicle carriers	78	0.024	1.9	
5	Pedestrian customer customer satisfaction	81.3	0.024	2	
6	Ship operator customer satisfaction	83	0.024	2	
<b>Operational Performance Aspects</b>					
7	Maneuver Time	80	0.238	19	69.7 (Weight 41.6)
8	average vehicle boarding time	80	0.059	4.7	
9	average time for vehicles to disembark from ship	100	0.059	5.9	
10	Time to queue for vehicles to board the ship	20	0.119	2.4	
11	Pier Usage Rate (Berth Occupancy Ratio/BOR)	40	0.238	9.5	
<b>Supporting Performance Aspects</b>					
12	Availability of technical planning documents for port development and port licensing	0	0.018	0	61.7 (Weight 7.8)

No	Indicator	Weight Value	Weight	Performance Value	Performance Value/ (aspect)
		(1)	(2)	(1) x (2)	
13	Implementation of the action plan contained in the planning document	0	0.018	0	
14	Service systems and procedures	75	0.016	1.2	
15	Implementation of the zoning system	100	0.016	1.6	
16	Integrated Information System Technology for Ferry Port Services and Operations	75	0.016	1.2	
17	Basic facilities of ferry port	83.9	0.007	0.6	
18	Supporting facilities for ferry ports	90.6	0.007	0.6	
19	Passenger Service Standards	67.5	0.006	0.4	
20	Vehicle Service Standards	82.1	0.006	0.5	
21	Ship Service Standards	62.5	0.006	0.4	
22	Availability of human resources	77	0.013	1	
23	HR Competence	27.2	0.013	0.4	
	<b>TOTAL PERFORMANCE VALUE</b>		<b>1.00</b>	<b>60.6</b>	

Based on the table above, we can see that the performance value of the Bastiong ferry port is 60.6, which means it is in the good category as can be seen in the following table:

Table 3 Performance categories of Bastiong ferry port

NO	PERFORMANCE VALUE INTERVAL	CATEGORY
1.	0 < Performance Value 20	Very less
2.	20 < Performance Value 40	Not enough
3.	40 < Performance Value 60	Currently
4.	60 < Performance Score 80	Good
5.	80 < Performance Value 100	Very good

### 3.3 Discussion

Based on the analysis results obtained, the recommended solution to overcome the problems at Bastiong Ferry Port is as follows:

- 1) Indicators of the development of the number of customers, the solution needed is to build public trust that the ferry port does not cause disease and provides a sense of security and comfort.
- 2) Customer satisfaction indicators, the solution needed is to provide information regarding ship departure schedules that can be accessed via the social media pages of the Port management agency.
- 3) The ship's maneuver time indicator requires skill from the ship operator to control the ship and also the pilot who directs the ship to dock.
- 4) Performance indicators for vehicle loading/unloading operational services, the solution needed is confirmation to ship operators regarding the presence or absence of passengers, ships must continue to operate according to the applicable schedule, as well as socialization to service users regarding arrival times at ferry ports.
- 5) Indicators of the level of dock usage, the solution needed is to add trips on pioneer routes to Bastiong Port in order to maximize the performance of dock usage so as not to experience empty time.
- 6) Completing the technical plan documents for port development and licensing for the Bastiong ferry port and creating action plan documents to obtain maximum assessment weighting.
- 7) Indicators of service systems and procedures, the solution needed is that the port management must immediately make and submit SOPs that do not yet exist in accordance with applicable provisions and submit them to the relevant parties.
- 8) Port facility indicators, the solutions needed are completing bunker facilities in the port area, adequate waste storage facilities, and submitting permits for operating the weighbridges that have been built.
- 9) Equipping human resources in accordance with the provisions of KP-DRDJ 539 of 2022 and every human resource at the Bastiong ferry port must undergo training and have adequate competency certificates.

## 4. CLOSING

### Conclusion

After conducting research based on the survey results and the results of the analysis carried out by the researcher, the following conclusions can be drawn:

- 1) The current performance of Bastiong ferry port services found that the growth rate of passenger vehicles and ships over the past five years has experienced fluctuating growth and has a value of 75 which is included in the "Good" category, the customer satisfaction indicator for vehicle carriers gets a value of 78 which is included in the "Good" category, the customer satisfaction indicator for pedestrians gets a value of 81.3 which is included in the "Very Good" category, and the satisfaction indicator for ship operators gets a value of 83 which is included in the "Very Good" category. The results of the service

aspect performance assessment can be seen to have a value of 77.8 with a Good category.

- 2) The current operational performance of the Bastiong ferry port found that the average ship maneuver time is 6 minutes, the average vehicle boarding time is 1.15 minutes, the average vehicle disembarking time is 11.5 seconds per vehicle, and the value of the dock usage time at the Bastiong ferry port is 33%. The results of the operational aspect performance assessment can be seen to have a value of 64 with a Good category.
- 3) The current supporting performance of the Bastiong ferry port is found that the value of the availability of technical development plan documents and permits and the implementation of its action plan is in the "very lacking" category with a value of 0. Meanwhile, the value of the service system and procedures is in the "Good" category with a value of 75, the value of the zoning application is in the "very good" category with a value of 100, the value of the integrated information system is 75 with the "good" category, the value of the main facilities is 83.9 and the supporting facilities are 90.6 with both categories "very good". The passenger service standard indicator is worth 67.5 and the ship is worth 62.5, both indicators are in the "good" category with the vehicle service standard being in the "very good" category with a value of 82.1. The assessment of the HR availability indicator is in the "good" category with a value of 77 while HR competency is in the "very lacking" category with a value of 27.2. The results of the supporting aspect performance assessment can be seen to have a value of 61.7 with the Good category.
- 4) The performance value of the Bastiong ferry port is in accordance with KP-DRJD 539 of 2022 concerning guidelines for planning, development and performance evaluation of river, lake and ferry ports. The performance value of the Bastiong ferry port is 60.6 which means it is included in the "Good" category.

#### 4.2 Suggestion

The suggestions that can be taken from the discussion and conclusions are as follows:

- 1) Propose procurement and improvement proposals to related parties regarding basic and supporting facilities as an aspect to improve the performance of the Bastiong ferry port.
- 2) Propose procurement proposals regarding equipment related to technical development plan documents and port licensing to relevant parties.
- 3) Cooperating with the UPT under the Ministry of Transportation by conducting outreach to ship operators regarding maneuvering, unloading, and optimizing loading times must not exceed the specified time.
- 4) Implementing an appeal to service users not to rush to come to the port if the departure schedule is still a long way off, just come 5 minutes before departure so you don't have to wait in line for too long.
- 5) Create and distribute information on ship departures and arrivals via social media that can be easily accessed by service users.

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