



Evaluation of Operational Performance Standards The Wharf at Kuala Tungkal Ferry Port, Tanjung Jabung Barat Regency, Jambi Province

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Abstract. In accordance with KP-DRJD 539 of 2022 concerning Guidelines for Planning, Development and Performance Evaluation of River, Lake and Ferry Ports, it is worthy of evaluation in order to determine the extent of operational performance that has been implemented so far. The purpose of this study is to determine the performance weight of the Kuala Tungkal Ferry Port. In this study, the researcher used a quantitative research method, namely collecting and processing figures that have been obtained through surveys. Based on the results of the study, it is known that the Kuala Tungkal Ferry Port has worked with an assessment weight of 76.7 and the category "Good" refers to KP-DRJD 539 of 2022 concerning Guidelines for Planning, Development and Performance Evaluation of River, Lake and Ferry Ports. This can be seen from the recorded ship maneuver time of 7 minutes and a rating of 80, the average time for vehicles to board and disembark the ship recorded at 25 seconds and 2 minutes 48 seconds with a rating of 100 and 80, the vehicle queue time to board the ship recorded at 12 hours 46 minutes and a rating of 20, and the pier usage ratio which received a score of 100. Thus, several actions are needed to improve the operational performance of the Kuala Tungkal Ferry Port such as ship traffic control by the LPS (Local Port Service) so that optimal ship maneuver time can be implemented. In addition, to optimize vehicle queue time, it is necessary to provide an appeal to the public to obey the rules in force in the Kuala Tungkal Ferry Port environment.

Keywords: Needs Review, Basic Land Facilities, Ferry Ports.

1. INTRODUCTION

Transportation plays an important role in supporting daily community activities and needs. Transportation can reach all corners of the region by integrating various existing modes of transportation. Ferry transportation is one mode of transportation that is a vital solution to connect areas separated by water. In accordance with its function, ferry transportation is used as a means to transport passengers, vehicles, and goods in carrying out mobility between islands (Law Number 17 of 2008). The realization of smooth mobility must be supported by complete port facilities and infrastructure. Therefore, ferry ports must have complete facilities and infrastructure so that the services provided to service users can run well.

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West Tanjung Jabung Regency, located in Jambi Province, has 3 (three) ferry ports managed by the West Tanjung Jabung Regency Transportation Agency. One of them is the Kuala Tungkal Ro-Ro Ferry Port which is located in West Tanjung Jabung Regency. Kuala Tungkal Ro-Ro Ferry Port operates every day and only serves 2 (two) crossing routes, namely Kuala Tungkal-Telaga Punggur and Kuala Tungkal-Dabo Singkep. The infrastructure at this port is still incomplete, especially in terms of basic land facilities. The incompleteness of these facilities has caused several problems, including the accumulation of passengers and vehicles on the edge of the trestle, vehicles entering the ship with unknown weight and height, and irregular vehicle parking.

According to Irwan et al. (2022), the Government has taken various steps to improve port facilities, both in the form of regulatory policies and investment policies. This regulatory policy is stated in Ministerial Decree Number 52 of 2004 concerning the Implementation of Ferry Ports which explains that every Ferry Port must have complete port facilities. Incomplete port facilities can hamper port operational activities and affect the level of security and comfort of service users. Therefore, Sikakap Ferry Port needs to fulfill the needs of basic land facilities in order to provide a sense of security, comfort, and safety for service users.

2. METHOD

The type of research used is quantitative research. According to Siyoto & Sodik (2015), quantitative research is research that uses data based on numbers, starting from collecting, interpreting, to displaying the results of the data. This study calculates the effective area plan for the main land facilities at the Kuala Tungkal Ro-Ro Ferry Port. The methods used to collect research data are:

a. Observation Method

The observation method is a method that involves all the senses to focus on an object in order to obtain the desired data. Observations can be in the form of observation guidelines, tests, questionnaires, image recordings, and sound recordings. (Siyoto & Sodik, 2015:81). Activities carried out include:

1) Observation of vehicles boarding/disembarking from the ship

Observation of vehicles getting on/off the ship is carried out by calculating the total time required to transport the total number of vehicles in 1 ship trip.

2) MB (Movable Bridge) pier observation

MB observations are needed to measure the level of pier usage, so that it can be determined whether the category of pier usage is optimal.

3) Documentation

Documentation is a record of past events. Documentation can be in the form of writing, pictures or monumental works from someone. (Hikmawati 2020:84). Documentation was carried out by taking photos of the existing condition of the main land facilities at the Kuala Tungkal Ro-Ro Ferry Port.

3. RESULT AND DISCUSSION

1. Data analysis

a. Analysis of Ship Maneuver Time at Kuala Tungkal Ferry Port.

Based on a survey conducted at Kuala Tungkal Ferry Port, it was found that the average maneuver time of a ship at Kuala Tungkal Ferry Port is 7 minutes. The calculation was made from when the ship was parallel to the breakwater until the ship opened the ramp door. Loading and unloading performance of Kuala Tungkal Port

b. Average Vehicle Boarding Time Analysis

Based on the results of the analysis that has been done, the average time required by a vehicle to board a ship at the Kuala Tungkal Ferry Port is around 25 seconds. Therefore, according to assessment criteria for the average time for vehicles to board a ship are in category 1 (less than or equal to 1 minute) with an assessment weight of 100. This is very appropriate and optimal, so it needs to be maintained.

c. Average Time Analysis of Vehicles Disembarking from Ship

Based on the results of the analysis that has been done, the average time required to unload a vehicle from a ship at the Kuala Tungkal Ferry Port is around 2 minutes 48 seconds. Therefore, according to assessment criteria for the average time for a vehicle to unload from a ship are in category 2 (more than 2 minutes or equal to 3 minutes) with an assessment weight of 80.

d. Analysis of Average Waiting Time for Vehicles to Board Ships

The observation result of the average vehicle queue time calculated from the time the vehicle entered the port until boarding the ship was 12 hours and 46 minutes. Based on the time, the assessment criteria for vehicle queue time to the ship are in category 5 (more than 30 minutes) with an assessment weight of 20.

- e. **AnalysisOperational Service Performance Against Facility Utilization** Analysis of operational service performance against facility utility (Berth Occupancy Ratio/BOR) is a comparison between the time of use of the pier and the time available (pier ready for operation) in a certain period of time expressed as a percentage. The calculation of the BOR value is carried out by utilizing secondary data available at the Port that is the target of the survey.

4. CONCLUSION

From the results of the analysis described previously, it can be concluded that:

1. The ship maneuver time at Kuala Tungkal Ferry Port has been running optimally, calculated from when the ship entered the port pool parallel to the breakwater until the ship opened the rampdoor. The results are in accordance with observations that have been made with an average time of 7 minutes. The results are in category 2 ($4 \text{ minutes} < \text{Tmt} \leq 7 \text{ minutes}$) with an assessment weight of 60. However, there are several notes so that the time by ship maneuver gets the maximum value, namely by paying attention to the ebb and flow of sea water at the Port, the crew's skills in driving the ship, and the port party establishing LPS (Local Port Services)
2. The average time for vehicles to board and disembark from and onto the ship was 25 seconds and 2 minutes 48 seconds respectively. Vehicle loading and unloading were in categories 1 and 2 with assessment weights of 100 and 80. Meanwhile, the vehicle queue time at the Kuala Tungkal Ferry Port was 12 hours 46 minutes, with the assessment criteria being in category 5 with an assessment weight of 20. This was due to the lack of coordination between the Port operator and the shipping agent as the Port operator had provided a queue for passengers who had not yet had tickets. In addition, several drivers were seen choosing not to board the ship that was loading at their own request and waiting to board the next ship. This certainly had an impact on the process of loading vehicles onto the ship.

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REFERENCE

- [1] Azliani, A. (2023). Review of Basic Land Facility Needs for Batulicin Ferry Port. Palembang River, Lake and Ferry Transportation Polytechnic.
- [2] Bahri, S. (2021). Identification of Vehicle Type and Weight Through Weighbridge. *Jurnal Inertia*, Vol.2 No.2, 2.
- [3] BPS Mentawai Islands Regency. (2024). Mentawai Islands Regency in Figures 2024: Vol. XX (BPS Mentawai Islands Regency, Ed.). BPS Mentawai Islands Regency.
- [4] Dimas, A. (2020). Review of the Function of Port State Control (PSC) in the Field of Sailing Safety, Crewing and Ship Operation in the Harbor Master's Office and Class I Port Authority of Batam. Amni Maritime University Semarang.
- [5] Fatimah, SN (2018). Integration of Railway, Road and Sea Transportation in Supporting Island Tourism in Pangkep. Hasanuddin University.
- [6] Firdaus, I., Hidayati, R., Hamidah, RS, Rianti, R., Cahyuni, R., & Khotimah, K. (2023). Data Collection Models in Classroom Action Research. *Journal of Student Creativity*, Vol.1 No.2, 107.
- [7] Hikmawati, F. (2020). *Research Methodology* (1st ed.). PT RAJAGRAFINDO PERSADA.
- [8] Ilham, CI (2022). Technical Evaluation of Performance and Facilities of River, Lake and Crossing Ports (Kodri, Ed.; 1st ed.). Adab Publisher.
- [9] Irwan, Surnata, Tungkup, DL, & Perdana, FW (2022). Characteristics of Ferry Ports (1st ed.). Publisher: Nas Media Pustaka.
- [10] Ministerial Decree Number 52 of 2004 concerning the Implementation of Ferry Ports (2004).
- [11] Regulation of the Director General of Land Transportation Number: SK.2681/AP.005/DRJD/2006 Concerning Operation Ferry Port (2006).
- [12] Regulation of the Minister of Public Works Number: 03/PRT/M/2014 Concerning Guidelines for Planning, Provision and Utilization of Pedestrian Network Infrastructure and Facilities in Urban Areas (2014).
- [13] Regulation of the Minister of Public Works Number: 26/PRT/M/2008 Concerning Technical Requirements for Protection Systems Fires in Buildings and the Environment (2008).
- [14] Regulation of the Minister of Transportation Number 103 of 2017 Concerning Regulation and Control of Vehicles Those Using Ferry Transportation Services (2017).
- [15] Septiawan, AT (2023). Analysis of the Service Level of Soekarno-Hatta Port Passenger Terminal *Makassar*. Hasanuddin University.
- [16] Siagian, T. Br. (2022). Analysis of Basic Land Facility Needs at Tobaku Ferry Port *Southeast Sulawesi Province*. River, Lake and Ferry Transportation Polytechnic Palembang.

- [17] Siyoto, S., & Sodik, M.A. (2015). Basic Research Methodology (Ayup, Ed.; 1st ed.). Media Publishing Literacy.
- [18] Soufana, F. (2021). Review of Land Facilities at Kayangan Port, West Nusa Tenggara Province in 2021. 2021. River, Lake and Ferry Transportation Polytechnic Palembang.
- [19] Suryani, S., & Muazansyah, I. (2020). Standards of Service for Tanjung Selor – Tarakan Crossing Transportation. *Journal of Public Policy and Management*, Vol. 10 No. 2, 153.
- [20] Law Number 17 of 2008 concerning Shipping (2008).

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