

Communication Efficiency Of Flight Traffic Guide With Pertamina Units And Rescue and Fire Fighting Services After Implementation Access Road At Aji Pangeran Tumenggung Pranoto Samarinda Airport

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Abstract— This research was conducted at Aji Pangeran Tumenggung Pranoto International Airport in Samarinda to determine the efficiency of communication after road access which affects flight safety. The method used in this research is descriptive qualitative. The data collection technique used was a documentation study and direct observation in the field from December 2020 to February 2021. The results showed that the movement of Pertamina and Rescue and Fire Fighting Services unit vehicles in the manoeuvring area and movement area of Aji Pangeran Tumenggung Pranoto Samarinda International Airport often impeded movement aircraft. There is a need for access road to improve flight safety and reduce the load of communication between air traffic controllers and the Pertamina and Rescue and Fire Fighting Services units at Aji Pangeran Tumenggung Pranoto International Airport, Samarinda.

Keywords—Efficiency, Communication, Access Road.

I. INTRODUCTION

Efficiency is the effectiveness of an organizational unit to achieve the desired goals is always related to organizational goals to be achieved by agencies [1]. According to [2] Efficiency is a measure of the level of use of resources in a process. The more efficient or less use of resourcepers, the process is said to be more efficient. An efficient process is characterized by process improvements so that it becomes cheaper and faster. Communication is a process of conveying information, ideas, emotions, skills, and others. Through the use of symbols such as words, pictures, numbers, etc [3]. Meanwhile, road access is a transportation infrastructure that facilitates the mobility of people and goods from one place to another [4]. Which means that the existence of road access can improve the process of human mobility and can achieve a more efficient communication process.

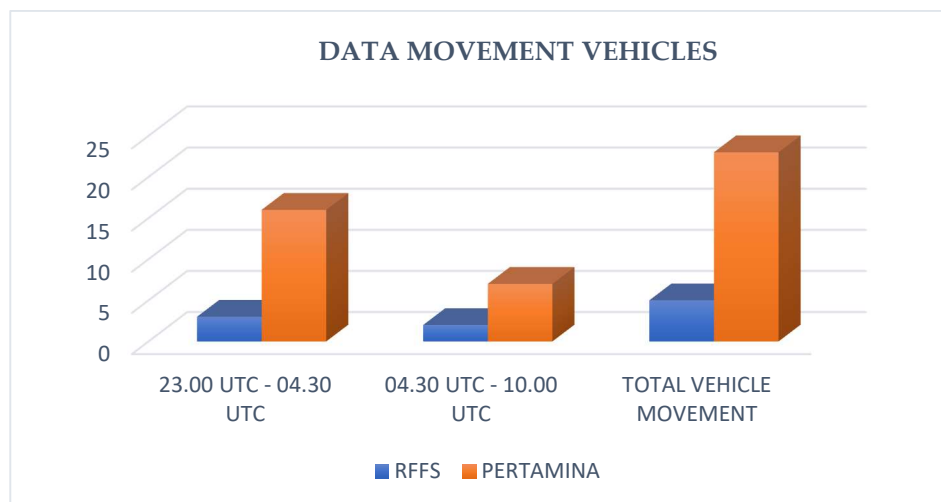
Every airport must have land side facilities, namely access roads or access roads as written in Article 202 Letter b concerning facilities [5]. In Annex 14 Chapter 9 Fire Stations it is said that a fire station must be placed so that the access road of a vehicle to the runway area can be passed directly and without obstacles [6]. The location of the fire station and Pertamina is in accordance with Annex 14, but there is no road access to or from the location of the fire station and Pertamina.

In the existing conditions at the Aji Prince Tumenggung Pranoto airport, there is only road access for vehicles that wish to go

to or from the Pertamina unit location in November 2022. Prior to the road access, the Pertamina and Rescue and Fire Fighting Services units had to go through the runway which could cause disruption to aircraft movements and potentially cause accidents or incidents, and could add to the workload of air traffic controllers, namely the load of communication. Because every movement of the vehicle must contact the air traffic control officer to request permission to enter the runway.

Pertamina's vehicles are one of the vehicles that always ask permission to pass from air traffic controllers to go through the runway because Pertamina's vehicles have to move towards the apron to refuel airplanes that will depart from Aji Prince Tumenggung Pranoto airport.

Table 1 Data Movement Vehicles



The table shows that Pertamina's vehicle movements are 23 movements/day, while for Rescue and Fire Fighting Services vehicles there are 5 movements/day, for a total of 28 movements per/day or 840 movements/month. Therefore the airport operator must provide adequate land side facilities for vehicles moving to the apron [7].

Several studies on access roads at airports, one of which is the research "Analysis of Access Road Development as an Effort to Improve Aviation Accident Assistance Units and Fire Extinguishers (Rescue and Fire Fighting Services) Facilities at Nusawiru Pangdaran Airport. The aim of this research is to find out the construction of an access road as an effort to improve the Aviation Accident Assistance Unit and Fire Fighting Unit (Rescue and Fire Fighting Services) facilities at Nusawiru Pangdaran Airport [8]. Another study entitled "Analysis of Vehicle Movement in the Airside Area on Aviation Safety Domine Eduard Osok Sorong Airport. Stating that the movement of vehicles in the airside area of Sorong Airport has not been well coordinated because they are still moving flexibly due to the absence of SOPs, guidance lines and access roads, as well as potential conflicts between aircraft taxiing and vehicles [9]. The purpose of this research was to compare the efficiency of communication before and after the road access for Pertamina and Rescue and Fire Fighting Services units at Aji Prince Tumenggung Pranoto Airport, Samarinda.

II. RESEARCH METHOD

The qualitative research method is a research method based on the philosophy of postpositivism and is used to study the state of natural objects, (as opposed to experiments) where the researcher is the key instrument, data collection techniques are carried out by triangulation (combined). Data analysis is inductive/qualitative in nature, and the results of qualitative research emphasize importance rather than generalization [10].

III. ANALYSIS AND DISCUSSION

The factor causing the large number of Pertamina and Rescue and Fire Fighting Services unit movements in the maneuvering area and movement area is the unavailability of road access to or from the location of the fire station. Unavailability of road access for Pertamina and Rescue and Fire Fighting Services units as access in and out of or to the land side, causing the movement of all Pertamina and Rescue and Fire Fighting Services vehicles and employees' vehicles to go through the maneuvering area (runway) and always contact or ask permission from the guide officer air traffic to pass. The movement of all

vehicles that must always seek approval to cross can add to the workload of the load of communication from the air traffic control officer. The process of vehicle movement also disrupts the movement of aircraft which can increase the risk of accidents and incidents.



Figure **Erreur ! Il n'y a pas de texte répondant à ce style dans ce document.**-1 Previous Access Road

As shown in the image above, there is no adequate road access for Pertamina and Rescue and Fire Fighting Services vehicles. the number of Pertamina and Rescue and Fire Fighting Services vehicle movements is 28 vehicle movements per day or 840 vehicle movements per month which are many causes of delays that disrupt the smooth running of flights, but after road access in November 2022 to get to or from the location of the fire station (Rescue and Fire Fighting Services) the number of vehicle movements reduced to 15 movements/day or 450 movements per month for Pertamina and Rescue and Fire Fighting Services units. The number of movements that change significantly affects the smooth flow of increased air traffic, reduces the risk of accidents and incidents, and reduces the workload of air traffic controllers with an efficient communication process that reduces the load of communication.

IV. CONCLUSION

Communication efficiency after the availability of road access causes the number of movements to change significantly. The reduced number of movements through the runway has an effect on the smooth flow of increased air traffic, reduces the risk of accidents and incidents occurring, and reduces the workload of air traffic controllers with an efficient communication process which reduces the load of communication. Based on the results of the research and discussion that has been described, it can be concluded that after the access road has started operating for Pertamina and Rescue and Fire Fighting Services vehicles it has a significant effect on the smooth movement of aircraft, reducing the risk of accidents and incidents and reducing the workload of air traffic controllers. namely the load of communication because the movement of vehicles no longer needs to go through the runway, the access road that goes directly to the landside does not need to ask permission from the air traffic control officer.

V. ACKNOWLEDMENT

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