

## Study of Sanitation Levels of Passenger Ships Boying at Tenau Port

Idharsyah Termanu Dasi<sup>1\*</sup>, Agus Setyobudi<sup>1</sup>, Mustakim Sahdan<sup>1</sup><sup>1</sup>Faculty of Public Health, Nusa Cendana University, Jl. Adi Sucipto Penfui, Penfui, Kec. Maulafa, Kota Kupang, Nusa Tenggara Tim. 85001, Indonesia

\*Corresponding author: Idharsyah Termanu Dasi | Received: 17.03.2022 | Accepted: 25.04.2022 | Published: 19.07.2022 |

**Abstract:** Ship sanitation is one of the efforts at environmental risk factors on ships to break the chain of disease transmission in order to maintain and enhance health status. Poor ship sanitation will cause many problems in terms of physical, health, aesthetics and human survival. The aim of this study is to know the description of the sanitation conditions on passenger ships that docked at the Kupang Tenau Port in 2022. The type of this study is descriptive. Population in this study is all passenger ships that dock at the Port of Tenau Kupang from 4 to 17 March 2022 totaling 8 vessels. Accidental Sampling is a technique for taking sample in this study (which is coincidence) totaling 8 ships. Instrument in this study used form of sanitation inspection from Health Office shipport. The results showing that on deck sanitation aspect there are 2 (25%) ships no fulfil condition on aspect cleanliness and good was neatly arranged and 6 (75%) ships fulfil terms. On aspect sanitation of crew member's room and passenger's room there are 5 (62.5%) not fulfil condition on aspect cleanliness and 3 (37.5%) ships fulfil terms. On aspect sanitation bathroom and toilet 8 (100%) boats no fulfil condition on aspect no smells fierce, 1 (12.5%) no fulfil condition on aspect good function and 8 (100%) ships fulfil condition on aspect cleanliness, not a place to store goods and there are no insects. On aspect sanitation kitchen of the 4 ships made inspection whole boat no fulfil condition on aspect wash equipment with hot water and 3 (75%) ships not have trash cover. On aspect sanitation room cooler there are 4 (100%) vessels full conditions (100%). On aspect sanitation warehouse supply boat there are 1 (25%) ship no fulfil condition on aspect cleanliness and 3 (75%) ships fulfil terms. On aspect sanitation handler food there are 4 (100%) ships fulfil conditions (100%). On aspect sanitation clean water supply there are 8 (100%) vessels full conditions (100%). Conclusion from 8 (100%) ships there are 5 (62.5%) ships enter in category good sanitation and 3 (37.5%) ships enter in category medium sanitation.

**Keywords:** Inspection Sanitation Ship, Ship passengers, Tenau Harbor.

### INTRODUCTION

Ship sanitation is one of the efforts aimed at environmental risk factors on ships to break the chain of disease transmission in order to maintain and enhance health status. Aspects that are assessed for ship sanitation include kitchens, food supply rooms, hatches, warehouses, crew rooms, clean water supply, and food presentation and disease-transmitting vector control (WHO, 2005).

Sanitation actions for ships are efforts for health, security, and control of environmental risk factors on ships to break the chain of disease transmission or contamination, including disinfection, decontamination, and deratization in order to maintain and enhance health status, thereby helping to reduce the spread of diseases caused by pests that can be transmitted through vector. The purpose of the ship

sanitation inspection is to ensure that the ship is free from the threat of disease that has the potential to become an epidemic, prevent the transmission of infectious diseases, and create a comfortable and safe atmosphere for passengers, crew and ship captains (WHO, 2007).

Poor ship sanitation will cause many problems, both physical, health, aesthetic and human survival. The level of sanitation of the ship will affect the number of vectors in the ship. Disease transmission can occur in public places due to the lack of clean water and latrines, poor waste and waste water management, vector density in the form of flies and mosquitoes, lack of ventilation and lighting, noise and others (Chandra, 2007).

According to data from ship inspections conducted by the port health office during 2017 of 856

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vessels that meet the requirements totaling 758 vessels, in the medium category there are 53 ships and 45 ships that do not meet the requirements. Based on initial observations made by researchers on one of the passenger ships at the Port of Tenau Kupang, the sanitary conditions of the deck look dirty and smelly, the bathroom has a strong smell, which creates the potential for insects.

## METHOD

The type of research used is descriptive research, which is a research method carried out with the aim of knowing the description of the sanitary

conditions of passenger ships that dock at the Port of Tenau Kupang in 2022. The data used are primary data, obtained from interviews conducted for 2 weeks from March 4 to 17, 2022 at the Port of Tenau Kupang. The purpose of this study is to describe the sanitation conditions on passenger ships that dock at the Kupang Tenau Port in 2022

## RESULTS

### 1. Distribution of Passenger Vessels Inspected at Kupang Tenau Port in 2022

The following is the distribution of passenger ships inspected at the Kupang Tenau Port in 2022.

**Table 1: Distribution of Inspected Passenger Vessels at Kupang Tenau Port in 2022**

No	Ship name	Inspection Date
1.	KM Express Bahari 3C	March 4, 2022
2.	KM Belt Nusantara 67	March 6, 2022
3.	KM Cantika Lestari 9C	March 7, 2022
4.	KM Express Bahari 1 F	March 8, 2022
5.	KM Belt Nusantara 104	March 8, 2022
6.	KM Willis	March 15, 2022
7.	KM Express Cantika 77	March 16, 2022
8.	KM Belt Archipelago 43	March 17, 2022

### 2. Deck Sanitation Overview

The following is the distribution of ship sanitation based on deck conditions on passenger ships that dock at the Kupang tenau port in 2022.

**Table 2: Distribution of Ship Sanitation Based on Deck Conditions on Passenger Ships docked at the Kupang Tenau Port in 2022**

Components of the Sanitation Aspect	Rating Indicator		Total
	MS	TS	
Cleanliness	8	0	8
Neatly arranged things	2	6	8
No insects	8	0	8

*MS: Eligible and TMS: Not Eligible*

Based on Table 2, it is known that of the 8 passenger ships inspected for deck conditions, in the aspect of cleanliness all ships meet the requirements (100%), while in the aspect of neatly arranged goods there are 6 (75%) ships that do not meet the requirements and 2 (25 %) the ship meets the requirements and on the aspect of no insects, the entire ship meets the requirements (100%).

### 3. Overview of the ship's crew/passenger's room

#### a. Ship Passenger Room Sanitation

The following is the distribution of ship sanitation based on the condition of passenger rooms on passenger ships that dock at the port of Tenau Kupang in 2022.

**Table 3: Ship Sanitation Distribution Based on Passenger Room Conditions on Passenger Vessels docked at Kupang Tenau Port in 2022**

Components of the Sanitation Aspect	Rating Indicator		Total
	MS	TS	
Cleanliness	3	5	8
Ventilation	8	0	8
Lighting	8	0	8
No insects	6	2	8

*MS : Eligible and TMS: Not Eligible*

Based on Table 3, it is known that of the 8 ships inspected there were 3 (37.5%) ships that met the

requirements for the cleanliness aspect while the other 5 (62.5%) did not meet the requirements, on the

ventilation aspect the whole ship met the requirements (100%), and on the aspect of the absence of 38 insects 6 (75%) ships met the requirements while 2 (25%) other ships did not meet the requirements.

**b. Sanitation of the crew's room**

The following is the distribution of ship sanitation based on the condition of the crew's rooms on passenger ships that dock at the Kupang tenau port in 2022.

**Table 4: Distribution of Ship Sanitation Based on Room Conditions of Ship's Crews on Passenger Ships docked at the Kupang Tenau Port in 2022**

Components of the Sanitation Aspect	Rating Indicator		Total
	MS	TS	
Cleanliness	4	0	5
Ventilation	5	0	5
Lighting	5	0	5
No insects	5	0	5

*MS : Eligible and TMS: Not Eligible*

Based on Table 4, it is known that of the 5 ships inspected with all aspects assessed, all ships met the requirements (100%).

**4. Overview of Bathroom and Toilet Sanitation**

**a. Ship's Bathroom Sanitation**

The following is the distribution of ship sanitation based on bathroom conditions on passenger ships that dock at the Kupang tenau port in 2022.

**Table 5: Distribution of Ship Sanitation Based on Bathroom Conditions on Passenger Ships docked at the Kupang Tenau Port in 2022**

Components of the Sanitation Aspect	Rating Indicator		Total
	MS	TS	
Cleanliness	8	0	8
No strong smell	0	8	8
Not a storage place	8	0	8
Faucet works well	7	1	8
No insects	4	4	8

*MS : Eligible and TMS: Not Eligible*

Based on Table 5, it is known that the components of the overall cleanliness aspect of the inspected ship meet the requirements, in the aspect of not having a strong odor all ships do not meet the requirements (100%). All aspects of non-food storage areas met the requirements (100%), while the sanitation aspect of the faucets was functioning properly, there were 7 (87.5%) vessels that met the requirements and 1 (12.5%) did not meet the requirements. Aspects of

sanitation no insects 4 (50%) ships meet the requirements and 4 (50%) ships do not meet the requirements.

**b. Ship Outhouse Sanitation**

The following is the distribution of ship sanitation based on latrine conditions on passenger ships that dock at the Kupang tenau port in 2022.

**Table 6: Distribution of Ship Sanitation Based on Outhouse Conditions on Passenger Ships docked at the Kupang Tenau Port in 2022**

Components of the Sanitation Aspect	Rating Indicator		Total
	MS	TS	
Cleanliness	8	0	8
No strong smell	0	8	8
Not a storage place	8	0	8
Faucet works well	7	1	8
No insects	8	0	8

*MS : Eligible and TMS: Not Eligible*

Based on table 6, it is known that all inspected ships meet the requirements on the cleanliness aspect (100%) and do not meet the requirements on the sanitation aspect without having a strong odor (100%). In the non-storage aspect, all ships meet the

requirements (100%), the faucets function properly 7 (87.5%) ships meet the requirements and 1 (12.5%) ships do not meet the requirements, while in the sanitation aspect there are no insects on the whole ship. qualified (100%).

## 5. Kitchen Sanitation Overview

The following is the distribution of ship sanitation based on kitchen conditions on passenger ships that dock at the Kupang tenau port in 2022.

**Table 7: Distribution of Ship Sanitation Based on Kitchen Conditions on Passenger Ships docking at the Kupang Tenau Port in 2022**

Components of the Sanitation Aspect	Rating Indicator		Total
	MS	TS	
Cleanliness	2	2	4
Trash can close	1	3	4
Wash with hot water	0	4	4
Clean tools	4	0	4
Closed cooking food	4	0	4
No insects	8	0	4

*MS : Eligible and TMS: Not Eligible*

Based on table 7, it is known that the sanitary conditions of the kitchen in the cleanliness aspect of 2 (50%) ships meet the requirements and 2 (50%) ships do not meet the requirements, the aspect of closed trash bins 1 (25%) ships meet the requirements and 3 (75%) ships do not. fulfill the requirements, in the sanitation aspect, washing with hot water did not meet the requirements (100%), while in the sanitation aspect, all

clean equipment met the requirements, cooked food was covered and there were no insects. All inspected ships met the requirements (100%).

## 6. Refrigerator Sanitation Overview

The following is the distribution of ship sanitation based on cold room conditions on passenger ships that dock at the Kupang tenau port in 2022.

**Table 8: Distribution of Ship Sanitation Based on Conditions of Cooling Rooms on Passenger Ships docking at Kupang Tenau Harbor in 2022**

Components of the Sanitation Aspect	Rating Indicator		Total
	MS	TS	
Cleanliness	4	0	4
No smell	4	0	4
temperature	4	0	4
No rotten food	4	0	4
No insects	4	0	4

*MS : Eligible and TMS: Not Eligible*

Based on table 8, it is known that from a total of 4 ships that have refrigerated rooms, all aspects of sanitation are assessed, namely aspects of cleanliness, odorless, temperature, no rotten food and no insects (100).

## 7. Overview of Food Supply Warehouse Sanitation

The following is the distribution of ship sanitation based on the condition of the food supply warehouse on passenger ships that dock at the Kupang tenau port in 2022.

**Table 9: Ship Sanitation Distribution Based on Food Stock Warehouse Conditions on Passenger Vessels docked at Kupang Tenau Harbor in 2022**

Components of the Sanitation Aspect	Rating Indicator		Total
	MS	TS	
Cleanliness	3	1	4
Storing on the shelf	4	0	4
Good storage material	4	0	4
No insects	4	0	4

*MS : Eligible and TMS: Not Eligible*

Based on table 9 it is known that of the 4 ships that have food supply warehouses, 3 (75%) ships meet the requirements for all aspects of sanitation that are assessed, namely aspects of cleanliness, storing pad racks, good storage materials and no insects, while there

are 1 (25%) ) ships that do not meet the requirements in terms of cleanliness.

## 8. Overview of Food Handlers Sanitation

The following is the distribution of ship sanitation based on the condition of food handlers on

passenger ships that dock at the Kupang tenau port in 2022.

**Table 10: Distribution of Ship Sanitation Based on Conditions of Food Handlers on Passenger Ships docking at the Kupang Tenau Port in 2022**

Components of the Sanitation Aspect	Rating Indicator		Total
	MS	TS	
Healthy	4	0	4
Clean clothes	4	0	4
Clean body	4	0	4

*MS : Eligible and TMS: Not Eligible*

Based on table 10, it is known that the sanitary conditions of food handlers in the aspects of health, clean clothes, and clean bodies of all inspected ships meet the requirements (100%).

### 9. Overview of Sanitation Provision of Clean Water

The following is the distribution of ship sanitation based on the condition of providing clean water on passenger ships that dock at the Kupang tenau port in 2022.

**Table 11: Distribution of Ship Sanitation Based on Water Supply Conditions for Passenger Ships docked at the Kupang Tenau Port in 2022**

Components of the Sanitation Aspect	Rating Indicator		Total
	MS	TS	
Clean	8	0	8
Residual chlorine 0.2-0.4	-	-	-
pH 6.5-9.5	8	0	8

Based on table 11, it is known that in terms of clean and pH of the water the whole ship has met the requirements.

### 10. Overview of Ship Sanitation Level

The following is the distribution of ship sanitation based on the condition of the level of ship sanitation on passenger ships that dock at the Kupang tenau port in 2022.

**Table 12: Ship Sanitation Distribution Based on Ship Sanitation Level Conditions on Passenger Vessels docked at Kupang Tenau Port in 2022**

Rating Indicator	Number (Passenger Vessel)	Percentage %
Good (0-5)	5	62.5
Medium (6-12)	3	37.5
Less (13-17)	0	0
Ugly (>17)	0	0
<b>Amount</b>	<b>8</b>	<b>100</b>

Based on table 12, it is known that of the 8 ships inspected there were 5 (62.5%) ships that had a good level of sanitation and 3 (37.5%) ships that had a medium level of ship sanitation.

## DISCUSSION

### Ship Deck Sanitation Condition

Each ship has a different number and size of decks, KM Wilis has 6 decks, KM Sabuk Nusantara 104, KM Sabuk Nusantara 67 and KM Express Bahari 3C, KM Express Bahari 1F, KM Express Cantika and Cantika Lestari 9C have 3 decks. Aspects that do not meet the requirements of KM Wilis are that the passenger deck section is not clean, while in KM Sabuk Nusantara 104, the deck and stairs are not clean and the items are not neatly arranged because sleeping mattresses are placed on the road stairs so that it prevents pedestrians on the ship and can be the cause of insects or rats. Based on 8 ships inspected for deck

sanitation conditions, the number of ships that meet the requirements of all aspects of deck sanitation are 6 (75%) ships including KM Express Bahari 3C, KM Sabuk Nusantara 67, KM Cantika Lestari 9C, KM Express Bahari 1F, KM Express Cantika and KM Sabuk Nusantara. As for 2 (25%) ships that did not meet the requirements, namely KM Wilis and KM Sabuk Nusantara 104, both ships did not meet the requirements in the aspect of neatly arranged goods. Things that cause goods not to be neatly arranged include 47 sellers who board the ship often placing their sales in any place, there are passengers who leave their goods that are no longer used such as gates and other garbage. Each ship has its own cleaning staff, each deck has crew members who are responsible for the cleanliness of the deck and have a regular schedule to always clean the deck. Supervision, discipline and responsibility of the captain, crew and

Passengers are a requirement so that the cleanliness of the deck is always maintained so as to provide mutual comfort and safety.

### **Sanitation Conditions for the Room of Ship's Crews and Passengers**

Of the 8 (100%) ships that were inspected for the sanitary conditions of the passenger rooms in the sanitation aspect of cleanliness that did not meet the requirements, 5 (62.5%) ships, including KM Express Bahari 3C, KM Sabuk Nusantara 67, KM Wilis, KM Sabuk Nusantara 104 and KM Sabuk Nusantara 43 and 3 (37.5%) vessels that meet the requirements, namely KM Cantika Lestari 9C, KM Express Bahari 1F and KM Express Cantika. The crew and passenger rooms are places to rest, so they need to be kept clean so that passengers get comfortable while resting. The room lighting standard based on the Occupational Safety and Health Administration (OSHA) is 250 Lux and based on the National Environmental Quality Standards (NEQS) is 300 Lux. Aspects of sanitation ventilation and lighting all ships meet the requirements, this is because the ship has adequate ventilation and windows for the entry of light and air as well as lighting assisted with lights, besides that passenger rooms are also provided with Air Conditioning (AC) to regulate the room temperature and also lights for lighting. The media for the entry of sunlight into the ship has an important impact on the intensity of incoming lighting (Subaris and Haryono, 2007).

Insufficient lighting intensity can result in eye fatigue, in completing tasks, complaints of soreness in the eye area and headaches around the eyes, in a long period of time causing damage to the eye senses and mental fatigue (Subaris and Haryono, 2007). Therefore, an effort that can make the light intensity meet the requirements is to add artificial lighting using lamps. According to Notoatmojo (2007) ventilation functions to keep the room from bacteria, especially pathogenic bacteria and their guards to maintain optimum humidity. Air circulation that is not smooth can result in the risk of breeding places for pathogenic bacteria and disturbing the comfort of ship users because the temperature and humidity are not optimal. While in the aspect of the absence of insects there are 2 (25%) ships that do not meet the requirements, namely KM Wilis and KM Sabuk Nusantara 43 this is due to the dirt in the passenger room so there are cockroaches. Passenger awareness in maintaining cleanliness is very important apart from the crew. Therefore, it is necessary to provide education and reminders to passengers to always maintain cleanliness, for example by periodically announcing to all crew members to maintain cleanliness during the voyage.

### **Sanitary Conditions for Bathrooms and Toilets**

It is known that of the 8 (100%) ships inspected the number of bathrooms and latrines, including KM Sabuk Nusantara 31 bathrooms, KM

Wilis 60 bathrooms, KM Sabuk Nusantara 43 30 bathrooms, KM Express Bahari 1F 2 bathrooms, KM Cantika Lestari 9C 2 bathrooms, KM Express Cantika 77 2 bathrooms, KM Sabuk Nusantara 67 28 bathrooms, KM Express Cantika 2 bathrooms and Express Bahari 3C 2 bathrooms. Every bathroom and latrine inspected has met the requirements in terms of cleanliness and not a storage area (100%), while in the aspect of not having a strong odor, the whole ship does not meet the requirements (100%). In the sanitation aspect, the faucets are functioning properly, there are 1 (12.5%) ships that do not meet the requirements, namely KM Wilis, namely on Deck 3 there are 3 faucets that are not functioning, 7 (87.5%) ships that meet the requirements, including KM Express Bahari 1F, KM Sabuk Nusantara 67, KM Sabuk Nusantara 104, KM Sabuk Nusantara 43, KM Express Cantika, KM Express Bahari 3C and KM Cantika Lestari 9C. Meanwhile, in terms of sanitation, there are no insects, there are 4 (50%) ships that meet the requirements, namely KM Express Bahari 3C, KM Cantika Lestari 9C, KM Express Bahari 1F and KM Express Cantika, 4 (50%) ships that do not meet the requirements include KM Sabuk Nusantara 104, KM Sabuk Nusantara 67, KM Sabuk Nusantara 43 and KM Wilis.

Aspects of sanitation Bathrooms and latrines that do not meet the requirements, namely the presence of a fierce smell, this can disturb the comfort of passengers who get a place near the bathroom, the presence of this fierce smell is also one of the causes of insects in the bathroom. In addition, the availability of water is something that must be considered by ship owners so that all crew members can use the bathroom and toilet comfortably and cleanly.

### **Kitchen Sanitation Conditions**

It is known that of the 8 (100%) ships that were inspected, only 4 (50%) had a kitchen and 4 (50%) did not. The close distance, the long journey time of approximately 4 hours and the small size of the ship are the reasons the ship does not provide a kitchen room and only provides a canteen for passengers to eat. Ships that do not have kitchen space include KM Express Bahari 1F, KM Cantika Lestari 9C, KM Express Cantika, and KM Express Bahari 3C. based on inspection results. Of the 4 (100%) ships, there are 2 (50%) ships that do not meet the requirements in the sanitation aspect, namely KM Wilis and KM Sabuk Nusantara 104 and 2 (50%) ships that meet the requirements, namely KM Sabuk Nusantara 67 and KM Sabuk Nusantara 43 In the sanitation aspect, 3 (75%) vessels do not meet the requirements for KM Sabuk Nusantara 43, KM Sabuk Nusantara 104 and KM Wilis, for KM Wilis there is no trash can, they only use sacks as a substitute for filling garbage. Improper waste management will cause pollution and cause the risk of cross-contamination between waste and food in the kitchen, so that food becomes unhealthy and can even become toxic. The sanitation aspect of washing with hot

water does not meet the requirements (100%), all ships have a sink for washing equipment but only use plain water, not hot water. Meanwhile, in the sanitation aspect of closed cooking food, clean tools, no insects, all ships meet the requirements (100%). To maintain the kitchen sanitation aspect, the ship enforces a routine schedule for cleaning the kitchen room, providing informative media containing an appeal to keep the room clean. During food preparation, food serving and cleaning, it is mandatory to cover the trash cans in the kitchen area.

### **Refrigeration Room Sanitary Condition**

It is known that of the 8 (100%) ships that were inspected, there were 4 (50%) that had refrigerated rooms, including KM Wilis, KM Belt Nusantara 104, KM Sabuk Nusantara 67, KM Sabuk Nusantara 43 and ships that did not have a refrigeration room, namely KM Express Bahari 1F, KM Express Cantika, KM Express Bahari 3C and KM Cantika Lestari 9C. On ships that have cooling rooms, the sanitation aspects of the cooling rooms include clean, odorless, temperature, no rotten food and no insects have met the requirements (100%). The cold room on each ship has a different size, this is adjusted to the size of the ship and the rules in the ship that regulate how long the food storage time runs out and then is taken again to be provided during the ship's sailing.

### **Sanitation Conditions for Food Provision Warehouse**

It is known that of the 8 (100%) ships that were inspected, there were 4 (50%) ships that had food supply warehouses, namely KM Sabuk Nusantara 104, KM Sabuk Nusantara 67, KM Wilis and KM Sabuk Nusantara 43 while ships that did not have food supply warehouses. including KM Express Bahari 3C, KM Cantika Lestari 9C, KM Express Bahari 1F, and KM Express Cantika. The sanitation aspects assessed were cleanliness, storage on shelves, good storage materials and no insects were found. From the overall assessment aspect, there are 1 (25%) ships that do not meet the requirements in the aspect, namely KM Sabuk Nusantara 104. This is because the ship's food supply warehouse is also stored unused used bottles put in sacks and then placed together in the warehouse where food is stored. while 3 (75%) ships met the requirements. The food supply warehouse on each ship has a different size, this is adjusted to the size of the ship and the rules in the ship that regulate how long the food storage time runs out and then is taken again to be provided during the ship sailing.

### **Food Handlers Sanitary Conditions**

It is known that of the 8 ships that were inspected, there were 4 (50%) ships that had food handlers, namely KM Sabuk Nusantara 67, KM Sabuk Nusantara 43, KM Sabuk Nusantara 103, KM Wilis. Ships that do not have food handlers because these ships do not provide kitchens to cook food. All ships

inspected have met the requirements of healthy food handlers, clean clothes and clean bodies.

Food handlers as people who are in direct contact with the food being processed must of course be in good health and clean in terms of the hygiene of the processing personnel. It is very important to pay attention to health checks for food processors because the emergence of infectious diseases through food when investigated generally originates from food processors who work sick. If there are symptoms of digestive disease or the condition of the food handler is in an unhealthy condition, the food handler is not allowed to do food-related work until he is symptom free for at least 46 hours, and re-evaluates the status of infectious diseases.

### **Sanitation Conditions for Provision of Clean Water**

All ships inspected included KM Express Bahari 1F, KM Express Bahari 3C, KM Sabuk Nusantara 67, KM Sabuk Nusantara 103, KM Wilis, KM Cantika Lestari 9C, KM Express Cantika, and KM Sabuk Nusantara 43. All ships inspected has met the requirements, namely in the aspect of sanitation, cleanliness and pH 6.5-9.5. KM Express Bahari 1F with a water pH of 8.2, KM Express Bahari 3C with a water pH of 7, KM Sabuk Nusantara 67 with a water pH of 9.1, KM Sabuk Nusantara 103 with a water pH of 8.2, KM Wilis with a water pH of 8.7, KM Cantika Lestari 9C with a water pH of 7, KM Express Cantika with a water pH of 8.5 and KM Sabuk Nusantara 43 8.2. All ships that dock at Tenau Harbor are required to fill water directly from the port that has provided clean water according to standards. Filling is carried out on the related vessel until it is full according to the vessel's water storage capacity. Fast passenger ships refill clean water every day at Tenau Harbor because of the size of the water storage area on the ship which can only be used for 1 day. Provision of clean water is very much needed on ships and considering the need for water in ships varies, for example for kitchen needs, bathrooms and other needs. Therefore, the clean water used must always be considered, both in terms of facilities, quantity, and quality (Bachtiar, 2006).

### **Ship Sanitation Level Condition**

The inspection of ship sanitation is intended to ensure that ships are free from the threat of disease that has the potential to become an epidemic, prevent the transmission of infectious diseases, and create a comfortable and safe atmosphere for passengers, crew members (ABK) and ship captains (WHO, 2007). All ships that were inspected were found to be 5 (62.5%) ships with a good level of sanitation, namely KM 58 Express Bahari 1F, KM Express Cantika, KM Express KM Cantika Lestari 9C, KM Express Bahari 3C and KM Sabuk Nusantara 67, and 3 (37.5%) ships with a moderate level of sanitation include KM Wilis, KM Sabuk Nusantara 43 and KM Sabuk Nusantara 104. All types of ships are required to carry out ship sanitation

measures. The ship's sanitation inspection is carried out to issue a sanitation certificate in order to obtain a Sailing Health Permit (SIKB). The results of the examination are declared high risk or low risk. Ships with high risk will be issued a Ship Sanitation Control Certificate (SSCC), after sanitation measures have been carried out and if the risk factors are low, a Ship Sanitation Exemption Control Certificate (SSCEC) will be issued, and inspections are carried out once every six months (Depkes RI, 2015).

## CONCLUSION

In the aspect of deck sanitation, there are 2 (25%) ships that do not meet the requirements in terms of cleanliness and neatly arranged goods and 6 (75%) ships meet the requirements. In reviewing the sanitation aspect of the crew and passenger rooms, 5 (62.5%) did not meet the requirements for the cleanliness aspect and 3 (37.5%) ships met the requirements. A study of the sanitation aspects of bathrooms and latrines 8 (100%) ships did not meet the requirements on the aspect of not having a strong smell, 12 (%) did not meet the requirements on the aspect of the faucet functioning properly and 8 (100%) ships qualified on the aspect of cleanliness, not the place storage of goods and no insects. In the kitchen sanitation aspect, 4 ships did not have a kitchen so they were not inspected, from 4 ships that were inspected the whole ship did not meet the requirements, in the aspect of washing equipment with hot water and 3 (75%) ships did not have a garbage can cover. The description of the sanitation aspect of the cold room 4 ships do not have a cold room so they are not inspected, 4 (100%) ships meet the requirements (100%) 60. Description of the sanitation aspect The ship's inventory warehouse 4 ships do not have a food supply warehouse so that 4 ships are not inspected, there are 1 (25%) ships that do not meet the requirements in the aspect of cleanliness and 3 (75%) ships meet the requirements. In the sanitation aspect of food handlers, 4 ships do not have food handlers so they are not inspected, 4 (100%) ships meet the requirements (100%). Sanitation aspect of clean water supply 8 (100%) ships meet the requirements (100%) and based on the distribution of the overall condition of the ship, it is known that from 8 (100%) ships there are 5 (62.5%) ships in the category of good sanitation level and 3 (37.5%) ships are in the category of moderate level of sanitation.

Suggestions to the ship owner to be more strict in regulating passenger order while on the ship for the convenience of passengers and the cleanliness of the ship itself. In addition, ship owners are expected to be able to increase the quantity and quality of trash bins in terms of sanitation. and pay more attention to the condition of the bathroom and latrine, especially the handling for the fierce smell. The captain of the ship can provide directions and appeals to the crew and passengers to jointly maintain the condition of the ship so that it remains sanitary by improving the ship

cleaning system at anchor so that it does not become a breeding ground for insects for ABK (Children of the Ship). for passengers to increase awareness not to throw garbage carelessly. And the Port Health Office is expected to maintain a surveillance system.

## CONFLICT OF INTEREST

This article has absolutely no conflict of interest, collaboration or other interest with any party.

## THANK-YOU NOTE

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