THE REVIEW OF GOVERNANCE ACTIVITY ON WASTE MANAGEMENT IN SHIP OF PT.PELNI PERSERO TYPE 2000 PAX

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Abstract. The governance on waste management which did in ship type 2000 PAX KM. Dorolanda purposed to analyze waste management activity in a ship owned by PT.PELNI Persero. The research design is descriptive, with the Purposing Sampling technique, Amount of the respondents is 41 people—the data collected by the questioner, then analysis by descriptive. The result obtained by implementing waste sorting belongs to bad (1,76%). On the organic waste sorting and inorganic in category belong to good (2,63 %), and (2,73 %) but the sorting in grouping form also residue sorting in category belong to good enough. The difference with the collecting and transporting system belongs to a good (100%). The sorting system is still intricate, with a more complex type and composition of waste. The waste management that did in ship includes sorting, collecting, and transporting although in producing and last processing step is not done, remembering of the system and place which is not possible to both of the steps. The old paradigm that still did is collect, transport, and throw must be changed to be better. Each waste producer must be managed the waste according to constitution number 18 in 2008 about waste management. So, the principles of waste management give benefit value in economic, healthy value for passengers and in the area of ship environment.

Keywords: Governance; Management; Ship type 2000 PAX

Background

Sea pollution according to UNCLOS 1982 that a thing made by human which enter the sea environment cause of bad management, throwing to the sea by intentional or unintentional. The Amount of waste from the ship when docked at every harbour get attention because of more complex of waste type and composition so that the waste governance started by the source of waste with sorting, collecting, and transporting.

Found the problem identification when the implementation of sorting which did since placing from each dock still mix the waste type and composition so that the waste governance started by the source of waste with sorting, collecting must be done repeatedly in six dock above. The research

did in ship KM.Dorolanda type 2000 PAX, started from Jakarta, Surabaya and Makassar as a final research. So that got larger description from each harbour.This is descriptive research, with 41 samples, and Purposing Sampling technique, that is the technique of taking sample with determined some criterias (Sugiyono,2008).

To prevent the pollution in the sea, from ship activities, so every ship which is opperating in the waters must be to fulfil the preventing requirements and controling the pollution, because have the effect of environment, and passenger's health. The high of waste heap that produce from ship as same as with the level of passenger's consumption to the material needed which is consumption. Refers to the fact the governance of waste handling must be done well because in the implementation practice become the responsible of waste producer.The activity of sorting in grouping and separating the waste based on the type, Amount and characteristics of the waste, collecting and transporting which is done in ship is the influence aspect to waste management.

The purpose of the research which is hope with the governance of waste management in ship type 2000 PAX is an every waste producer must be manage the waste which they produced so that give the benefit value in economic, healthy value for passenger also in the area of ship environment and done the mandate of institution number 18 in 2008 about waste management.

Methods

The location of reasearch implementation in ship KM.Dorolonda Type 2000 PAX, the routes are Jakarta, Surabaya and Makassar in April,021. The prime of data using questioner, checklist and direct interview. The secondary data was taken by literature and documentation of PELNI. The analysis of data using descritive analysis. The identification was done to the handling of waste governance in ship to the harbour which is determined.The respondent in the research are 41 people using Slovin Wiratna, Poly's formula(2012),that is: n = N/1 + N (Ne2)

Descriptions:

N= Amount of the sample

e= % respite from thorougness/ presition because of the mistake in taking sample which can be tolerate 0,05/ that the sample is enough to represent the population

N= Number of population:PIDC,ABK,Jenang, Kitchen,Store, Music Room. So, to know the smple of the research, with counting as follows:

$$N = N/1 + Ne2$$
$$= N/1 (N \times e)2$$
$$= 44/1 + (21 + 0{,}05)2$$
$$= 44/1 + (21 + 0{,}0025)$$
$$= 44 + 1 (0{,}0025)$$
$$= 44 \times 0{,}0025 + 1$$
$$= 44/1{,}075$$
$$= 40{,}93 (41)$$

Results

Table 1.Result of sorting identification like waste grouping in ship in 2021

NO	CATEGORY	%
1	Fulfil the requirements	50
2	Not fulfil the requirements	50
	Total	100

Source : Primary data processed 2021

Based on the observation which has been done using checklist which refers to The Teaching's Book of Health Environment Waste management. Waste Mangement in PT. Persero Pelni in 2021. Based on the health's requirement with category >75% fulfil the requirements and < 75 % not eligible. For the aspect of sorting does not meet the reguirements with a value of 50%.

Table 2.Result of sorting identification collection in ship in 2021

NO	CATEGORY	%
1	Fulfil the requirements	85,7
2	Not fulfil the requirements	14,3
	Total	100

Source : Primary data processed 2021

Based on the observation which has been done using checklist which refers to The Teaching's Book of Health Environment Waste management. Waste Mangement in PT. Persero Pelni in 2021. Based on the health's requirement with category >75% fulfil the requirements and < 75 % not eligible. For the aspect of sorting does not meet the reguirements with a value of 85,7%.

Table 3. Results of the identification of waste transportation on ships in 2021

NO	CATEGORY	%
1	Fulfil the requirements	85,7
2	Not fulfil the requirements	14,3

Total	100

Source : Primary data processed 2021

Based on the observation which has been done using checklist which refers to The Teaching's Book of Health Environment Waste management. Waste Mangement in PT. Persero Pelni in 2021. Based on the health's requirement with category >75% fulfil the requirements and < 75 % not eligible. For the transportation aspect, it meets the requirements with a value of 10.

Table 4. Results of identification regarding onboard processing in 2021

NO	CATEGORY	%
1	Fulfil the requirements	0
2	Not fulfil the requirements	100
	Total	100

Source : Primary data processed 2021

Based on the observation which has been done using checklist which refers to The Teaching's Book of Health Environment Waste management. Waste Mangement in PT. Persero Pelni in 2021. Based on the health's requirement with category >75% fulfil the requirements and < 75 % not eligible. For the processing aspect does not meet the requirements with a value of 100%.

Discussion

The Review of Governance Activity on Waste Management in Ship of PT.PELNI Persero TYPE 2000 PAX

The Play role of merchant ship in sea transportation make it easy an economic activity of society in the region and outside the region. Sea transportation as inter-island crossing often said as" the serving sector" with real activity, scheduled activity and implemented, needed the service with suitable transportation service (Adiasmita,2011). The activity of waste management which done in KM.Dorolonda led by ship captain, although cleanliness in daily waste management under the boatswain authority.

The waste management started from the trip/ voyage of Jakarta as home base continued to Surabaya Harbour, Makassar an go on. The waste which produced in ship the volume will be increased marked by the number of passengers get increased. With increased of the number passengers directly proportional with increased of waste produced. Therefore, more the number of passengers which will be produced. Subekti (2017) littering, had direct effect to cleanliness, healthy and environment. Isman (2016), Bangun (2019) stated the waste which come from sea can caused the life of sea creature threatened. Oigman (2007), Thomson et all (2004) and Deraik (2002) agree that waste from sea is true threatened for ecosystem. Plastic material and food wrapping contributed also to destroyed wild sea creature (Baulch,2002), (Bellwood,2004), (Barnes,2002).

Waste management in sorting item like grouping the waste type is not fulfil the requirements, because still not done wate grouping which can result and waste which can reused again. Based on Jofius D,2018 waste management is the activity which cover of sorting (grouping and separating the waste based on the type and characteristics), Collecting (moved the waste from the waste source to the waste dump), transporting (the activity of moved the waste from source to waste dump), Processed of last result (change the shape, composition and characteristics and Amount of the waste in order to further processing, utilized or returned to the nature and last processing, the activity of processing waste or residue the result of processing before in order to returned to environmental media.

Result of the research showed that the implementation of waste sorting which done KM.Dorolanda in category bad (1,76%). Phase of the sorting consist from waste grouping activity which contain dangerous chemical material, biodegrable waste, reusable waste, and recycle waste, showed not fulfil the requirements from range score <75%.

COLLECTING

Collecting aspect which grouping in item is not mixed well. The collecting done after waste done collecting and can not mixed after the separating step and placing. Provision of facilities waste collecting which in the ship

belong to good if seen the number of plastic bag which have some colours and adequate when waste will bring down in the harbour.

On the suite of waste management in ship, the operational of collecting waste done in one day 3-4 times, so that the operational which done is not good enough. If in a day only 2 times will cause bad smell, because customized with the eating time of passengers. The scheduled of collecting done faster when embarkation and debarkation. Organic waste collected in 6th deck using green plastics, tied, placed on the fringe, also for the inorganic waste collected using black plastics or yellow. On this collected consist of type of the waste sorting with. Where the scheduled setting of collected based on type of the sorting waste and source of the waste which produced from each deck. The provision of sorting waste collection facility in the ship belong to good. But need to do a supervision. According to Wiwik P (2004) that the cost of processed will increased if the facility is not used well, for example the plastic bag for accommodate the waste should be filled fully, but filled half from the volume after tied then bring to 6th deck belong to good. With frequency of transporting accustomed with the eating time and waste collection pattern which done by PIDC belong to good. This collecting done in taking form and moving from waste source in each deck then moved to6th deck ship right hull. Customized when docked ship will bring down the waste from right hull side. The system of moving the waste dump customized in 6th deck belong to good with eating time and waste collection pattern which done by PIDC belong to good.

Transporting

Result of the research showed that waste transporting in each deck still mixed. Then moved to 6th deck left hull above continued to sorting. In transporting attention is maximize the capacity of plastics bag which to accommodate the waste.

The route which used from the way used by the passengers until 6th deck. According to Joseph H (2011) the collecting operational make bigger the potentional of organic waste, the periodisation of service maximum once a day. Although in the location of collecting in a day about 3 until 4 times transporting done.

The transporting system which done in KM.Dorolanda by waste transporting with direct collecting waste in each deck from waste source of passengers. This waste collecting by the transporting system from each deck then to 6th deck. Although like that in transporting operational attention to transport pattern in the determined hour. The facility which available to support the transporting system which make easy when the waste already full from each deck when the waste is in 6th deck up PIDC done rotation with considered the efficiency and the effectivity of transporting.

Where the organic waste become priority which have to handle first to done the transporting in order not to produce bad smell. Next, the transporting frequency done customized with Amount of the waste which has been there then done the transporting. Arrived in harbour the waste is bring down used trash launcher tool.

CONCLUTION

Processing and last process step is not done in the ship KM.Dorolanda. In general, the old system like collect, transport, throw made the standard of procedure operational about waste management.The constitution number 18 in 2008 warn that waste must be manage started from the source. Remember the sea pollution must be anticipated for further marine ecosystem. So that the principle in managing give continued value and have economic value.

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