Pro-Environmental Behaviour Of Seafarers In Relation To Environmental Attitudes And Leadership

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Abstract

Human work activities are ongoing and evolving. These activities can often affect the preservation of the natural environment. Indonesia's vast sea area makes many work activities related to the sea, including shipping activities. Shipping activities that are increasing in addition to providing social and economic benefits, on the other hand, can also cause problems related to the condition of marine environmental sustainability. Seafarers are one of the key factors in helping to preserve the marine environment, so it is necessary for seafarers to raise awareness of work behaviours that support the sustainability of the marine environment. In the context of work, pro-environmental behaviour can be defined as a series of work activities completed by employees in a responsible and environmentally friendly manner. Attitudes about the environment and environmental leadership are factors that can theoretically influence employees' pro-environmental behaviour in the work setting. This study examines how pro-environmental behaviour models in Indonesian seafarers in terms of attitudes about the environment and leadership both directly and through the mediation of proenvironmental behavioural intentions. Based on the results of this study, it can be concluded that attitudes about the environment and leadership have a direct influence on pro-environmental behaviour in seafarers. Both factors also have an influence on the intention to behave environmentally, where in the end the intention to behave environmentally can encourage the emergence of pro-environmental behaviour in seafarers.

INTRODUCTION

The increase in population growth and the development of technology and the economy of society, not only have a positive impact on life but also cause various problems that require attention. One of the problem[1]s arising from these global changes is problems related to the environment. The high level of human interaction with the environment can often trigger problems with the environment in which humans live. The environment is a unit of space with all objects and living things in it including humans and their behaviour that affects the sustainability of human life and also other living things. Problems related to the environment tend to increase as human activities in various fields of life increase.

Human life activities that continue to grow are work activities. Various work activities can be directly related to the surrounding environment. These activities often have an impact on the sustainability of the natural environment. Employees spend almost a third of their lives at work, it is expected that environmentally friendly behaviour from employees in terms of proactive and task-related behaviours will minimise adverse impacts on the environment both natural and artificial (Dahiya, 2020). Several studies have highlighted

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the important role of workers in an organisation's efforts related to environmental sustainability. Various studies have shown that in an organisational context, worker participation and involvement are important factors for implementing environmental management systems (Ture and Ganesh, 2014). Therefore, it is necessary to study various matters related to the behaviour of individual workers and organisations that aim to reduce the negative impact of work processes on the natural environment.

Indonesia as an archipelago has two-thirds of its territory is water area. As an archipelago, almost all areas in Indonesia have water areas both rivers and seas. The vast sea area in Indonesia makes many activities of people's lives have a great dependence on the sea. Many human life activities depend on the sea, both from the utilisation of marine natural resources and also transport activities that are used as a means of connecting and other human life activities. Sea transport can also make a huge contribution to the national and regional economy in the territory of Indonesia, even internationally. In addition to providing economic benefits, increased shipping activities can also cause problems related to the condition of marine environmental sustainability. Marine pollution is currently an issue that needs attention. Marine pollution from ships is an event that is not desired but is a condition that cannot be avoided (Husin, 2016). Hagen (in Culin and Bielic, 2016) revealed that work activities from ships can historically be a major source of marine plastic pollution due to the tradition of dumping garbage at sea. Shipping activities also contribute to the amount of marine litter. In shipping and other maritime activities, the sea as a place close to workers makes a connection between work activities and their impact on the environment (Andersson et al, 2016).

The ocean, which plays an important role in the lives of the Indonesian people, makes the preservation and balance of the marine environment very important. Therefore, the protection of the sea from the danger of pollution is a necessity. To be able to realise this, it requires the active involvement of individuals involved in work activities in the shipping sector, namely seafarers. Seafarers are one of the key factors in helping to preserve the marine environment in carrying out their work activities while sailing. It is necessary for seafarers to have an awareness of themselves to be able to participate in generating work behaviour to preserve the marine environment where the seafarers work. Pro-environmental work behaviours can positively support efforts to preserve the marine environment.

Pro-environmental behaviour is essential to address pollution problems and promote sustainable development (Paille and Boiral, 2013). Different terms have been developed to describe pro-environmental behaviour, but these studies focus on explaining that pro-environmental behaviour is a human effort to minimise the negative impact of human behaviour on the environment (Blok et al, 2015). Pro-environmental behaviour can also be explained as the behaviour of being willing to engage in environmental conservation efforts, which are carried out deliberately to reduce the negative impacts and cause as little harm to the environment as possible and provide great benefits to the environment, including minimising resource and energy consumption, using nontoxic substances, reducing waste production. (Kollmuss and Agyeman, 2002; Steg and Vlek, 2009; Dono et al, 2010).

When associated with work processes, pro-environmental behaviour in the work context can be defined as a set of work activities completed by employees that are done in a responsible and environmentally friendly manner (Bissing-Olson et al, 2012; Graves et al, 2013). Such behaviour can be manifested in actions such as learning more about the environment, developing and implementing ideas to reduce the company's environmental impact, developing environmentally friendly processes and products, recycling and

reusing, and questioning work practices or activities that can damage the environment (Graves, et al, 2013). Employees can perform these environmentally friendly behaviours during the process of completing their work tasks. Employee participation in environment-related initiatives in the work process is complex, as proenvironmental behaviour is more voluntary than mandatory (Foster et al, 2022). Several studies have reported findings suggesting that employee engagement in environmental activities can be linked to pollution prevention, more efficient environmental management systems, improved environmental performance and green innovation (Paillé and Boiral, 2013).

A number of studies in psychology have been conducted to understand the various factors that can influence individual environmental behaviour. Factors that have both positive and negative influences on proenvironmental behaviour include demographic factors, external factors such as institutional, economic, social and cultural factors (Kollmuss and Agyeman, 2002) and internal factors such as motivation, knowledge, awareness, values, attitudes, emotions, locus of control, beliefs, responsibilities and priorities (Kollmuss and Agyeman, 2002; de Groot and Steg, 2009). In the context of work, Blok, et al (2015) stated about the factors that influence pro-environmental behaviour in the workplace. These factors are internal factors and external factors. Internal factors are identified as social factors consisting of personal norms and social norms, cognitive factors consisting of environmental awareness, propensity to act, and perceived behavioural control, and affective factors, such as values and attitudes about the environment. While external factors include situational factors, leadership support and supervisor leadership.

As an important factor predicting environmental behaviour, environmental attitudes have received much attention from researchers. Overall, there is a significant correlation between environmental attitudes and proenvironmental behaviour (Kollmuss and Agyeman 2002; Blok et al, 2015; Prati et al, 2015; Giefer et al, 2019). The significant correlation suggests that environmental attitudes can influence environmental behaviour in employees. Abun and Racoma (2017) stated that the existence of an attitude about the environment can motivate the person to behave pro-environmentally. People with high levels of environmental attitudes tend to act more pro-environmentally. It was found that there is a significant relationship between attitudes towards ecological behaviour and environmental behaviour in organisations. The significant correlation concluded that attitudes towards the environment can influence environmental behaviour in employees.

Human attitudes and behaviour towards the environment are the result of a collectivity of individual decisions on how to interact well with their environment (Fauzie et al, 2016). Berkowitz explains that a person's attitude towards an object is a feeling of support or favourability or a feeling of non-support or unfavourability to the object (Azwar, 2016). Ajzen & Fishben (2000) use the term attitude to refer to the evaluation of an object, concept, or behaviour along the dimensions of like or dislike, good or bad, like or dislike. In relation to the environment, attitudes about the environment can be conceptualised as a broad view of the human-environment relationship, as a psychological tendency expressed by evaluating the natural environment on some level of liking or disliking (Milfont and Duckitt, 2010; Prati, et al, 2015). The intensity of attitudes about the environment can differ between individuals due to their association with cognitive, affective components and behavioural tendencies (Rokicka, 2002).

Strong environmental attitudes are demonstrated by those who have a social circle that is involved in ecological issues and discusses such issues with the social circle; those who are well educated and have achieved a relatively high standard of living; those who have a positive orientation towards their community and participate in local politics; and those who have lived in a community for a long time (Rokicka, 2002). Thus, social circle, social

stratification position, community attachment, and residential ties can be considered as strong determinants of the emergence of attitudes about the environment. Milfont and Duckitt (2010) stated that attitudes about the environment can be measured using 12 environmental attitude scales, which include: enjoyment of nature, support for interventionist conservation policies, environmental activism movements, motivation for conservation by anthropocentric concerns, belief in science and technology, environmental fragility, changing nature, personal conservation behaviour, human dominance over nature, human use of nature, ecocentric concerns, and support for population growth policies.

In the context of work in an organisation, Graves et al (2013) revealed the role of leadership and employee motivation in encouraging pro-environmental behaviour. The role of leaders is focused on environmental transformational leadership provided by direct supervisors to subordinates. Transformational leadership is leadership by leaders who are able to revitalise and transform an organisation (Greenberg, 2011). Leadership provided by direct supervisors is particularly important; as it is usually highly visible to employees, and may have a major influence on the pro-environmental behaviour of employees. The value-based and inspirational nature of transformational leadership makes it suitable for encouraging environmentally responsible behaviour. Several studies have shown the influence of transformational leadership on environmental behaviour (Robertson and Carleton, 2017; Saleem et al, 2019; Li et al, 2020; Peng et al, 2021). Environmentally-related transformational leadership is specifically positively related to environmental behaviour, both directly and indirectly. Environment-related transformational leadership is an effective approach for organisations to increase the pro-environmental behaviour of work teams in the organisation.

In the context of shipping activities, the role of leaders in shipping plays an important role in preserving the sea. The ship as a carrier in sea transport in its operation to be able to meet the criteria both from economic factors and safety factors need to have three elements that must be met, namely: human elements, equipment elements, and regulatory elements. Humans are the main element, while technical elements or equipment and regulations are supporting elements. In carrying out their duties according to their functions, the ship's crew, both officers and subordinates, need to always coordinate, so that the role of the skipper as a leader is very important in developing their duties (Guritno, 2019).

Robertson and Carleton (2017) explain that environmentally transformational leaders directly influence employees to behave in an environmentally responsible manner. Graves et al. (2013) describe environmental transformational leadership. Environmental transformational leadership is described as leadership that is able to communicate an environmental vision: is able to communicate a clear and coherent environmental vision according to the area of responsibility; can act as a role model by sharing environmental values, discussing the importance of environmental sustainability, and taking actions that demonstrate a commitment to addressing environmental issues; can motivate employees by providing a picture of a future where work activities are more environmentally friendly, talking about what employees should do to create the future, and showing confidence in employee abilities; can encourage employees to question assumptions about environmental issues and consider new and diverse ideas to solve environmental problems; can develop employee capacity to address environmental issues by assessing the development needs of each employee and providing appropriate learning opportunities individually.

The behaviour displayed by each individual is very diverse. To understand behaviour, Ajzen and Fishbein (2000) explain that intention to act is the strongest predictor of actual behaviour. Human actions are guided by three types of considerations, namely beliefs

about the likely consequences of behaviour (behavioural beliefs), beliefs about the normative expectations of others (normative beliefs), and beliefs about the existence of factors that can promote or inhibit the performance of behaviour (control beliefs). Research findings from conducted by Blok et al (2015) indicate that the theory of planned behaviour can explain pro-environmental behaviour in the workplace. Intention to act was the most significant factor for determining pro-environmental behaviour in the workplace and all three antecedents of intention to act were also significant. Intention to behave is a direct and important driver of actual behaviour in general and pro-environmental behaviour in particular.

Based on the above discussion, environmental attitudes and environmental leadership are predicted to have an influence on pro-environmental behaviour in the workplace, in this case on seafarers in shipping activities. The purpose of this study is to determine how the pro-environmental behaviour model of seafarers can be predicted from attitudes about the environment and leadership with the mediation of behavioural intentions.

RESEARCH METHODS

Samples and Sampling Techniques
Respondents in this study were 383 Indonesian civil seafarers who referred to the definition of crew as stated in the Law of the Republic of Indonesia no 17 of 2008 concerning Shipping in article 1 paragraph 40 which explains that crew is a person who works or is employed on a ship by the owner or operator of the ship to perform duties on the ship in accordance with his position. The sampling technique is carried out by sample random sampling technique.

This research uses a quantitative approach with a survey approach and uses a questionnaire as a data collection tool. The variables studied consist of attitudes about the environment and leadership as exogenous variables that are tested in building models of pro-environmental behaviour variables which are endogenous variables with behavioural intention as a mediating variable. This study aims to obtain a model of the pro-environmental behaviour variable built from the variables of attitudes about the environment and leadership with the mediation of behavioural intention. Data collection was carried out using a measuring instrument in the form of a questionnaire conducted using the Google Form link with the consideration that the distribution of questionnaires through Google Form could reach seafarer respondents widely.

Research Questionnaire
In the research questionnaire, pro-environmental behaviour, environmental attitude, leadership and proenvironmental behavioural intention were operationalised. Based on the operational definitions set, a questionnaire was prepared as a measuring tool for data collection. The questionnaire consists of an environmental attitude scale, a leadership scale, a pro-environmental behaviour scale and a behavioural intention scale. The questionnaire in this study was designed using a Likert scale model by providing 5 answer options from each item submitted to respondents tailored to the variables being measured. The items are divided into favourable and unfavourable items to see the consistency of the respondents' answers.

The pro-environmental behaviour in this study is defined operationally as a series of work behaviours carried out by seafarers while carrying out sailing duties that aim to play a role in reducing the negative impacts of shipping activities carried out on the preservation of the marine environment or as little as possible to harm the preservation of the marine environment and as much as possible to provide great benefits to the marine environment

through which the shipping route passes. Pro-environmental behaviour in seafarers is measured through 15 statements using a 5-scale with a range of answer options from almost never (score 1) to almost always (score 5).

Attitude towards the environment is operationally defined as a seafarer's psychological predisposition about the marine environment expressed by evaluating the marine environment in terms of liking or disliking it as a belief that influences his or her behaviour in relation to the environment. This variable is measured through 34 statement items using 5 scales with a range of answer options from strongly disagree (score 1) to strongly agree (score 5).

Environmental leadership is operationally defined as seafarers' assessment of the leadership exercised by direct supervisors to encourage seafarers' behaviour related to marine environmental conservation efforts. This leadership variable is measured through 15 statement items using a 5-item scale with a range of answer options from strongly disagree (score 1) to strongly agree (score 5). Meanwhile, pro-environmental behavioural intention is operationally defined as a measure of the strength of intention in seafarers to perform proenvironmental behaviour when carrying out sailing duties. This pro-environmental behaviour intention variable is measured through 9 statement items by also using 5 scales with a range of answer choices from strongly disagree (score 1) to strongly agree (score 5).

Conceptual Framework and Research Hypothesis

The conceptual framework of the model and research hypothesis is presented in Figure 1 below
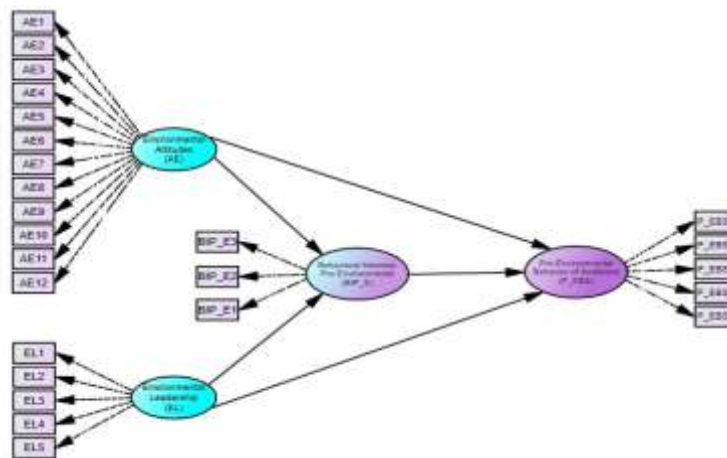

Figure 1. Conceptual Framework of Environmental Attitudes, Environmental Leadership on Pro-Environmental Behaviour of Seafarers with Pro-Environmental Behavioural Intention as intervening variable.

While the hypothesis in the study is stated as follows:

Hypothesis 1 : Attitudes about the environment have an influence on the intention to behave proenvironmentally.

Hypothesis 2 : Environmental leadership has an influence on pro-environmental behavioural intention.

Hypothesis 3 : Attitudes about the environment have an influence on pro-environmental behaviour.

Hypothesis 4 : Leadership has an influence on pro-environmental behaviour.

Hypothesis 5 : Behavioural intention has an influence on pro-environmental behaviour.

Hypothesis 6: Attitude about the environment has an influence on pro-environmental behaviour with mediation of behavioural intention.

Hypothesis 7: Environmental leadership has an influence on pro-environmental behaviour with the mediation of behavioural intention.

Data Analysis

Related to the purpose of modeling pro-environmental behaviour in terms of environmental attitudes and environmental leadership, data analysis was carried out using structural equation modelling. Structural Equation Modelling (SEM) allows researchers to test and estimate simultaneously the relationship between multiple exogenous variables and endogenous variables with many indicators (Latan, 2013). The SEM approach used in this study is Covariance-based SEM (CB-SEM). The form of data in this study is interval data and in a large sample size situation, the CB-SEM estimation results tend to be more accurate (Sholihin and Ratmono, 2021). The data testing and complete model analysis were carried out using the AMOS programme.

Structural Equation Modeling can be used to thoroughly explain the relationship between variables in the study (Hair Jr et al., 2010). There are six steps in conducting SEM analysis, starting with determining individual constructs, determining measurement models, assessing the reliability and validity of measurement models, determining structural models, assessing the validity of structural models to make conclusions and recommendations. The stages of analysis carried out are measurement model evaluation, goodness of fit and structural model evaluation. Evaluation of the measurement model, namely convergent validity, is used to determine the correlation between each indicator and its latent variable. Convergent validity is declared valid if the standardised loading factor (λ) value is greater than 0.5, while discriminant validity is seen from the Average Variance Extracted (AVE) root value which is greater than 0.5. Composite-Reliability (C-R) is a block of indicators that measure a construct and can be evaluated by internal consistency measures. Composite reliability is acceptable if the latent variable coefficient is greater than 0.7. After testing the validity and reliability of each latent variable, some prerequisites that must be met in structural modelling are normal multivariate assumptions, assumptions of the absence of multicollinearity or singularity and outliers. The next step is to make conclusions based on the results of hypothesis testing on structural coefficients and model fit.

RESEARCH RESULTS

The measurement model includes convergent validity, discriminant validity and reliability tests. In detail, the validity and reliability of each indicator and latent variable are presented in Table 1.

Table 1. Validity and Reliability Testing of Research Variables

Latent Variables	Indicators	p variance error	Loading (λ)$\Box$	$\Box 2$	1 - $\Box^2$	C-R (AVE) [squared root of AVE]

Environmental Attitudes (AE)	Enjoyment of nature and willingness to protect marine ecosystem (AE1)	0.000	0.699	0.489	0.511	0.915 (0.576)
	Support for conservation policies to protect the marine environment (AE2)	0.000	0.740	0.548	0.452	[0.759]
	support and engage in Environmental activism to protect the marine environment (AE3))	0.000	0.774	0.599	0.401	
	Anthropocentric concern to protect the marine ecosystem (AE4)	0.000	0.805	0.648	0.352	
	Belief in science that can protect the marine environment now and in the future (AE5)	0.000	0.525	0.276	0.724	
	feel the need to protect the marine ecosystem (AE6)	0.000	0.742	0.551	0.449	
	Belief in altering the marine environment (AE7)	0.000	0.652	0.425	0.575	
	Personalised conservation for conserving and protecting the marine environment (AE8)	0.000	0.804	0.646	0.354	
	Dominance over nature not to use the sea arbitrarily (AE9)	0.000	0.671	0.450	0.550	
	Utilisation of nature associated with protecting the marine environment (AE10)	0.000	0.662	0.438	0.562	
	Ecocentric concern for the protection of marine ecosystems (AE11)	0.000	0.567	0.321	0.679	
	Support for population growth (AE12)	0.000	0.569	0.324	0.676	
Environmental Leadership (EL)	communicate responsibility (EL1)	0.000	0.870	0.757	0.243	
	act as a role model for subordinates (EL2)	0.000	0.837	0.701	0.299	
	trusting in the abilities of subordinates (EL3)	0.000	0.830	0.689	0.311	0.924 (0.709) [0.842]
	encourage subordinates to solve problems (EL4)	0.000	0.814	0.663	0.337	
	develop the capacity of subordinates to learn (EL5)	0.000	0.859	0.738	0.262	
Behavioural Intention ProEnvironmental (BIP_E)	Behavioural beliefs (BIP_E1)	0.000	0.835	0.697	0.303	0.867 (0.686) [0.828]
	Normative beliefs (BIP_E2)	0.000	0.872	0.760	0.240	
	Control beliefs (BIP_E3)	0.000	0.775	0.601	0.399	
Pro-Environmental	Learning more about the environment (P_EBS1)	0.000	0.790	0.624	0.376	0.851 (0.541)

Behaviour of Seafarers (P_EBS)	Developing and implementing ideas to reduce environmental impacts (P_EBS2)	0.000	0.829	0.687	0.313	[0.736]
	Developing environmentally friendly work processes (P_EBS3)	0.000	0.583	0.340	0.660	
	Recycling and reusing goods (P_EBS4)	0.000	0.550	0.303	0.698	
	Questioning activities that can damage the environment (P_EBS5)	0.000	0.867	0.752	0.248	

Table 1 shows that the latent variables Environmental Attitudes (AE), Environmental Leadership (EL), ProEnvironmental Behavioural Intention (BIP_E) and Pro-Environmental Behaviour of Seafarers (P_EBS) provide factor loading values, AVE roots and Composite Reliability (C-R) values above the cut-off value so that they can be said to be convergent valid, discriminant valid and reliable. Likewise, in each indicator, all variance error p values are smaller than 0.05, so it is said that all indicators are reliable.

Environmental Attitudes (AE) is formed by indicators of liking being in the marine environment and willing to protect the marine ecosystem (AE1) with a standardised loading factor (λ) = 0.699, support for company policies to protect the marine environment (AE2) with a standardised loading factor (λ) = 0.740, support and involvement to protect the marine environment (AE3) with a standardised loading factor (λ) = 0,774, support to participate in protecting the marine environment and ecosystems (AE4) with a standardised loading factor (λ) value = 0.805, belief that knowledge can protect the current and future marine environment (AE5) with a standardised loading factor (λ) value = 0.525, feel the need to participate in protecting marine ecosystems (AE6) with a standardised loading factor (λ) value = 0,742, belief in changing and improving the marine environment (AE7) with standardised loading factor (λ) = 0.652, belief in preserving and protecting the marine environment (AE8) with standardised loading factor (λ) = 0.804, not using the sea arbitrarily (AE9) with standardised loading factor (λ) = 0.671, belief that economic development is important in relation to marine environmental protection (AE10) with standardised loading factor (λ) = 0.662, willingness to pay attention to marine environmental ecosystem protection (AE11) with standardised loading factor (λ) = 0.567, and support for growth policies (AE12) with standardised loading factor (λ) = 0.569.

Environmental Leadership (EL) is formed by indicators of communicating responsibility (EL1) with a standardised loading factor (λ) = 0.870, acting as a role model for subordinates (EL2) with a standardised loading factor (λ) = 0.837, trust in employees' abilities (EL3) with a standardised loading factor (λ) value = 0.830, encouraging subordinates to solve problems (EL4) with a standardised loading factor (λ) value = 0.814, and developing subordinates' capacity to learn (EL5) with a standardised loading factor (λ) value = 0.859. Meanwhile, the Behavioral Intention Pro-Environmental (BIP_E) variable is formed by indicators of behavioural beliefs (BIP_E1) with a standardized loading factor (λ) value = 0.835, normative beliefs (BIP_E2) with a standardized loading factor (λ) value = 0.872, and control beliefs (BIP_E3) with a standardized loading factor (λ) value = 0.775. Meanwhile, the Pro-Environmental Behavior of Seafarers (P_EBS) variable is formed by indicators of learning more about the environment (P_EBS1) with a standardized loading factor (λ) value = 0.790, developing and implementing ideas to reduce the company's environmental impact (P_EBS2) with a standardized loading factor (λ) value = 0,829,

developing environmentally friendly processes and products (P_EBS3) with a standardised loading factor (λ) = 0.583, recycling and reusing (P_EBS4) with a standardised loading factor (λ) = 0.550, and questioning environmentally damaging practices (P_EBS5) with a standardised loading factor (λ) = 0.867.

After testing the validity and reliability of each latent variable, some prerequisites that must be met in structural modelling are normal multivariate assumptions, assumptions of the absence of multicollinearity or singularity and outliers. The results of data normality testing on all research variables provide a multivariate Critical Ratio value of 1.143 and this value lies outside -1.96 to 1.96, so it can be said that the data has a multivariate normal distribution. Singularity can be seen through the determinant of the covariance matrix. The results gave a Determinant of sample covariance matrix value of 0.137. This value is not close to zero so it can be said that there is no singularity problem in the analysed data. Multicollinearity can be seen through the correlation between exogenous latent variables. The results of the study provide a p value that each exogenous latent variable, namely: (Environmental Attitudes (AE) with Environmental Leadership (EL) of 0.142). This value is greater than ($\square$ =0.05) so it can be said that there is no multicollinearity problem in the analysed data. Outliers are observations that appear with extreme values uniariate or multivariate. The results of the outlier test in this study are presented in Mahalanobis distance or Mahalanobis d-squared. A Mahalanobis value greater than the Chi-square table or a p1 value <0.001 is said to be an outlier observation. In this study there are four outlier data, because it is still below 5 per cent of the observations, it can be said that there are no outliers.

Furthermore, the path diagram of the Pro-Environmental Behaviour of Seafarers (P_EBS) model is presented as follows:
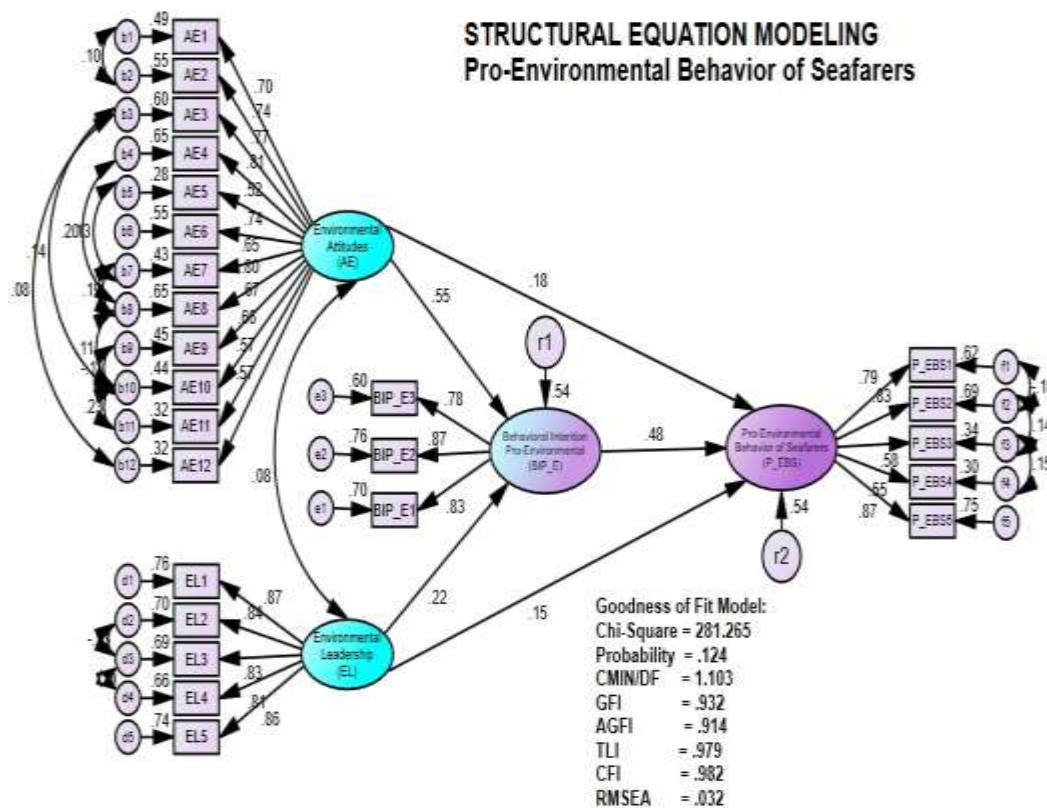
Figure 2. Relationship Model of Environmental Attitudes, Environmental Leadership to Pro-Environmental Behaviour of Seafarers with Pro-Environmental Behavioural Intention as intervening variable.

The results of testing the measurement model with the AMOS programme can be seen in the following table:

Table 2:
Test Results of Environmental Attitudes, Environmental Leadership on Pro-Environmental Behaviour of Seafarers with ProEnvironmental Behavioural Intention as an intervening variable.

Goodness of Fit (GoF)	Cut - Off Value	Calculation Result	Description
Chi - Square	Expectedly small	281.265	□2 with df = 255 is 293,248 Good
Significance Probability	□ 0,05	0.124	Good
RMSEA	□ 0,08	0.032	Good
GFI	□ 0,90	0.932	Good
AGFI	□ 0,90	0.914	Good
CMIN/DF	□ 2,00	1.103	Good
TLI	□ 0,90	0.979	Good
CFI	□ 0,90	0.982	Good

From the appropriate model, each path coefficient can be interpreted through the following structural equation:

$$BIP\_E = 0.548\ AE + 0.221\ EL$$
$$P\_EBS = 0.181\ AE + 0.151\ EL + 0.476\ BIP\_E$$

with,
AE : Environmental Attitudes
EL : Environmental Leadership
BIP_E : Pro-Environmental Behavioural Intention
P_EBS : Pro-Environmental Behaviour of Seafarers

The path coefficient test in Figure 2 and the above equation in detail is presented in the following
table:

Table 3:
Results of Path Coefficient Testing Model Environmental Attitudes, Environmental Leadership to Pro-Environmental Behaviour of Seafarers with Pro-Environmental Behavioural Intention as an intervening variable.

Variables	Coefficient	C.R.	Prob.	Explanations
Environmental Attitudes (AE)→ Behavioural Intention Pro-Environmental (BIP_E)	0.548	6.610	0.000	Significant

Environmental Leadership (EL)→ Behavioural Intention Pro-Environmental (BIP_E)	0.221	2.908	0.004	Significant
Environmental Attitudes (AE)→ Pro-Environmental Behaviour of Seafarers (P_EBS)	0.181	2.092	0.036	Significant
Environmental Leadership (EL)→ Pro-Environmental Behaviour of Seafarers (P_EBS)	0.151	2.015	0.044	Significant
Pro-Environmental Behavioural Intention (BIP_E)→ Pro-Environmental Behavior of Seafarers (P_EBS)	0.476	6.433	0.000	Significant

Based on Table 3, the interpretation of each path coefficient according to the hypothesis in this study is as follows:

1) Hypothesis 1 : Attitudes about the environment have an influence on the intention to behave proenvironmentally.

   Hypothesis 1 which states that Environmental Attitudes (AE) have a positive and significant effect on ProEnvironmental Behavioural Intention (BIP_E) is accepted. This can be seen from the positive path coefficient of 0.548 with a C.R. value of 6.610 and obtained a significance probability (p) of 0.000 which is smaller than the significance level (α) determined at 0.05. Thus Environmental Attitudes (AE) has a direct effect on Pro-Environmental Behavioural Intention (BIP_E) of 0.548, which means that every increase in Environmental Attitudes (AE) will increase Pro-Environmental Behavioural Intention (BIP_E) by 0.548.

2) Hypothesis 2 : Environmental leadership has an influence on pro-environmental behaviour intention.

   Hypothesis 2 which states that Environmental Leadership (EL) has a positive and significant effect on ProEnvironmental Behavioural Intention (BIP_E) is accepted. This can be seen from the positive path coefficient of 0.221 with a C.R. value of 2.908 and obtained a significance probability (p) of 0.004 which is smaller than the significance level (α) determined at 0.05. Thus Environmental Leadership (EL) has a direct effect on Pro-Environmental Behavioural Intention (BIP_E) of 0.221, which means that every increase in Environmental Leadership (EL) will increase Pro-Environmental Behavioural Intention (BIP_E) by 0.221.

3) Hypothesis 3 : Attitudes about the environment have an influence on pro-environmental behaviour. Hypothesis 3 which states that Environmental Attitudes (AE) has a positive and significant effect on ProEnvironmental Behaviour of Seafarers (P_EBS) is accepted. This can be seen from the positive path coefficient of 0.181 with a C.R. value of 2.092 and obtained a significance probability (p) of 0.036 which is smaller than the significance level (α) determined at 0.05. Thus Environmental Attitudes (AE) has a direct effect on Pro-Environmental Behaviour of Seafarers (P_EBS) of 0.181, which means that every increase in Environmental Attitudes (AE) will increase Pro-Environmental Behaviour of Seafarers (P_EBS) by 0.181.

4) Hypothesis 4 : Leadership has an influence on pro-environmental behaviour.

   Hypothesis 4 which states that Environmental Leadership (EL) has a positive and significant effect on ProEnvironmental Behaviour of Seafarers (P_EBS) is accepted. This can be seen from the positive path coefficient of 0.151 with a C.R. value of 2.015 and obtained a significance probability (p) of 0.044 which is smaller than the specified significance level (α) of 0.05. Thus Environmental Leadership (EL) has a direct effect on Pro-Environmental Behaviour of Seafarers (P_EBS) of 0.151, which means that

every increase in Environmental Leadership (EL) will increase Pro-Environmental Behaviour of Seafarers (P_EBS) by 0.151.

5) Hypothesis 5   : Behavioural intention has an influence on pro-environmental behaviour.

Hypothesis 5 which states that Pro-Environmental Behavioural Intention (BIP_E) has a positive and significant effect on Pro-Environmental Behaviour of Seafarers (P_EBS) is accepted. This can be seen from the positive path coefficient of 0.476 with a C.R. value of 6.433 and obtained a significance probability (p) of 0.000 which is smaller than the specified significance level ($\square$) of 0.05. Thus, Behavioural Intention Pro-Environmental (BIP_E) has a direct effect on Pro-Environmental Behavior of Seafarers (P_EBS) of 0.476, which means that every increase in Behavioural Intention Pro-Environmental (BIP_E) will increase Pro-Environmental Behavior of Seafarers (P_EBS) by 0.476.

6) Hypothesis 6: Attitude about the environment has an influence on pro-environmental behaviour with the mediation of behavioural intention.

Hypothesis 6 which states that Environmental Attitudes (AE) has an influence on Pro-Environmental Behaviour of Seafarers (P_EBS) with the mediation of Pro-Environmental Behavioural Intention (BIP_E) is accepted. The indirect effect of the Environmental Attitudes (AE) variable on Pro-Environmental Behaviour of Seafarers (P_EBS) with the mediation of the intervening endogenous latent variable (Behavioural Intention Pro-Environmental (BIP_E)) is 0.261.

7) Hypothesis 7: Environmental leadership has an influence on pro-environmental behaviour with the mediation of behavioural intention.

Hypothesis 7 which states that Environmental Leadership (EL) has an influence on Pro-Environmental Behaviour of Seafarers (P_EBS) with the mediation of Behavioural Intention Pro-Environmental (BIP_E) is accepted. The indirect effect of Environmental Leadership (EL) on Pro-Environmental Behaviour of Seafarers (P_EBS) Environmental Leadership (EL) with the mediation of the intervening endogenous latent variable (Behavioural Intention Pro-Environmental (BIP_E)) is 0.105.

DISCUSSION

This study found that attitudes about the environment have a significant effect both directly on seafarers' proenvironmental behaviour and through the mediation of pro-environmental behavioural intentions. How seafarers evaluate their feelings related to the marine environment in which they work can drive their work behaviour that can support environmental sustainability. Overall, there was a significant correlation between attitudes about the environment and pro-environmental behaviour. The significant correlation suggests that environmental attitudes influence employees' environmental behaviour (Abun and Racoma, 2017). A person with a high level of environmental attitude tends to act more pro-environmentally (Kollmuss and Agyeman 2002; Maiteny 2002; Chen et al, 2011; Prati et al, 2015).

Attitude is a determinant factor that is positively associated with behavioural intention (Ajzen, 1991; Ajzen and Fishben, 2000; Lulfs and Hahn, 2013, Blok et al, 2015). Attitudes about the environment have a strong relationship with ecological behavioural intentions and further influence ecological behaviour (Fauzie, 2017). Attitudes can indirectly influence individual pro-environmental behaviour. Values and attitudes play an important role in determining a person's pro-environmental behaviour (Kollmuss and Agyeman 2002).

In the work context, attitudes have an influence on behavioural intentions to perform pro-environmental behaviours within the company (Tudor et al., 2007; Cordano et al., 2010; Lulfs and Hahn, 2013). Thus, attitude is a strong predictor of pro-environmental behaviour

in employees in the workplace. Employees with more positive attitudes towards the environment report more pro-environmental behaviour (Bissing-Olson et al, 2012). Research results from Tian et al (2019) showed that environmental attitudes can positively predict expected voluntary green work behaviour of employees by being mediated by controlled and autonomous motivation.

Environmental attitudes are important because they often, though not always, determine behaviours that improve or degrade environmental quality (Gifford and Sussman, 2012). Attitudes about the environment can motivate people to adopt pro-environmental behaviours. Seafarers' positive attitudes towards marine sustainability can be a strong driver of pro-environmental work behaviours. The more positive the seafarer's attitude towards environmental sustainability, the stronger the tendency of seafarers' pro-environmental work behaviour.

This study also shows the results of the influence between leadership on seafarers' pro-environmental behaviour both directly and through the mediation of pro-environmental behavioural intentions. The role of the leader in the study focused on the environmental transformational leadership provided by the direct supervisor of the seafarer on the ship. Value-based and inspirational transformational leadership is effective in driving changes in employees' environmental work behaviour (Graves et al, 2011).

Leadership is a significant antecedent in predicting pro-environmental behaviour in employees. There are several publications that are in line with the findings in this study regarding environmental leadership and seafarers' pro-environmental behavioural intentions. The findings of these existing studies indicate that exemplary leader behaviour has a significant impact on employees' intention to act pro-environmentally (Lulfs and Hahn, 2013; Blok et al 2015). Consistent with transformational leadership theory, managers who engage in high transformational leadership can set a strong environmental vision, set environmental-related expectations, and help employees fulfil those expectations (Graves et al, 2013). Pro-environmental behaviour is often rewarded indirectly, and this makes the supervisor a more important factor as it is the supervisor who can encourage subordinates' ecological behaviour initiatives in the workplace (Lulfs and Hahn, 2013). Leaders with positive transformational leadership can act as role models related to environmental values, emphasising environmental conservation activities and also directing to take steps to address environmental problems (Robertson and Carleton, 2017). Pro-environmental behaviour in organisations can be influenced by leadership through its role to direct its members in achieving organisational goals.

Managers' environmental transformational leadership is critical to facilitating employees' pro-environmental behaviour. Organisations that want to encourage employees to engage in pro-environmental behaviour should ensure that managers or leaders have the ability to provide transformational leadership on environmental issues. (Graves et al, 2013). Management's attitude and direct personal involvement and their ability to communicate why environmental sustainability is beneficial to the organisation are also important for employees' environmental behaviour. If management has a strong belief and commitment to environmental sustainability, it can set an example for other employees (Graves et al, 2013; Young et al, 2015). The role of superiors as role models regarding pro-environmental behaviour should be recognised, developed and enhanced, as exemplary behaviour by superiors can significantly increase employees' intention to act proenvironmentally (Blok et al, 2015).

In shipping activities, the role of leaders in shipping plays an important role in preserving the sea. In carrying out routine tasks according to their functions, ship crews need to always

coordinate, so that the role of the leader is very important in developing their duties (Guritno, 2019). Based on the results of this study, when the leadership of superiors on the ship is positively assessed by seafarers in communicating and sharing positive values related to the marine environment, this can increase the intention of seafarers to behave proenvironmentally and can further encourage seafarers to increasingly carry out work behaviours that support the preservation of the marine environment. The tendency of seafarers to positively evaluate leadership from superiors while on duty on the ship can encourage pro-environmental behaviour from seafarers while carrying out sailing duties.

CONCLUSIONS

Based on the results of data analysis and discussion, this study concludes that environmental attitudes have an influence on the intention of pro-environmental behaviour and environmental leadership also has an influence on the intention of pro-environmental behaviour in seafarers significantly. Furthermore, environmental attitude has a significant effect on seafarers' pro-environmental behaviour, and environmental leadership also shows a direct influence on seafarers' pro-environmental behaviour. Pro-environmental behavioural intentions further have a direct effect on seafarers' pro-environmental behaviour. Meanwhile, environmental attitude also shows a significant indirect influence on seafarers' pro-environmental behaviour through the mediation of proenvironmental behavioural intention. Similarly, environmental leadership has an indirect influence on seafarers' pro-environmental behaviour through the mediation of pro-environmental behavioural intentions. Thus, it can be concluded from this study that environmental attitudes and environmental leadership influence pro-environmental behaviour related to the marine environment in seafarers both directly and indirectly through the mediation of pro-environmental behavioural intentions. Therefore, it is important for every seafarer to have a positive attitude towards the marine environment so that it can generate a stronger intention to behave environmentally in carrying out their duties and ultimately can encourage the emergence of pro-environmental work behaviour. The role of a leader in shipping activities that supports pro-environmental work behaviour will encourage seafarers to always behave in ways that support the preservation of the marine environment.

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