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Issues Faced by Fishermen on the Implementation of Standards of Training, Certification and Watch-Keeping for Fishing Vessels (STCW-F 1995): Perak Fishery Industry

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ABSTRACT

STCW-F 1995 is a safety requirement for all fishing personnel. The Perak fishing industry already begins to expand larger and have bright potential in future. To preserve fishing industry, all the fishing vessel personnel must have a basic precaution for safety at sea for the right example STCW-F. The method used in this paper by conducting interview/questionnaires with fisherman around Perak districts. The result is statically calculated and separated into several factors such as cost, awareness, attitude, government/fisherman association role and lack of facilities. The result shown the issues faced by fisherman on the implementation of STCW-F 1995. Data shown that fisherman are really care about their safety, but constraints in terms of cost are major issue faced by fisherman.
KEYWORDS: STCW-F 1995, Fishing Industry, Safety for Fisherman.

INTRODUCTION

The International Convention on Standards of Training, Certification and Watch-keeping for Fishing Vessel Personnel 1995 [22] is an International Maritime Organization (IMO) convention under United Nation. This convention (15 articles and 4 chapters) sets the certification and minimum training requirements for crews of seagoing fishing vessels of 24 meters in length and above [5]. According to Department of Fisheries Malaysia, the total number of registered fisherman that working under Malaysia fishing sector estimated around 239653 [4]. STCW-F 1995 is for fishing vessel above 24 meters, due to that statement not all the fisherman will comply with this convention.

Fishing has been categorized as one of the most life-threatening professions in the world, an extremely discomforting conclusion in the global fishing industry (International Labor Organization ILO, IMO and Food and Agriculture Organization of United Nations FAO). Human errors contribute to 80% of accidents [7, 8, 14], caused by the negligence on the part of the management. Staff should undergo trainings for performance improvement. All the crucial mechanical devices used, e.g. hull, machineries and other fishing equipment must be maintained for optimal efficiency.

The improvement strategies for the safety of fishing vessels are as shown below:

i. Vessels should be worthy of sea conditions
ii. Crew who are sufficiently trained and who are highly competent
iii. Management practice which emphasizes on safety.

It is crucial for boats and vessels have sea worthiness equipped with satisfactory machineries and outfitting. In addition, a sound regulatory system should be designed to monitor the pertinent safety operations in terms of maintenance and crew inspection. The standards should be universal in nature, which are bound to international contracts [15, 16, 17].

For this, the Torremolinos Inter. Convention and its 1993 Protocol advocate the much needed framework. Of equal importance to the standards of the vessels are the standards for the crew. The crew should be exposed to relevant training which equips them with the qualifications and knowledge of proper work procedures. As the fishing industry

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involves open sea sailing and international maritime industrial interaction, it is of utmost importance that the crew has the highest standards of training, qualifications and certifications. These standards must adhere to recognized international criteria which satisfy a specific global convention. Hence, the Convention on Standards of Training, Certification and Watch-keeping for Fishing Vessel Personnel 1995 are prepared for fishing personnel [2, 22].

The 1995 STCW-F Convention

This convention is complementary to the Torremolinos Protocol through the formation of regulatory scheme for the training and proper certification of the fishing crew. STCW-F is an addition to the 1978 STCW Convention. The amended convention stipulates the necessary training and certification criteria for skipper and watch keepers on fishing vessels with the dimension beyond 24 meters, for engineers on vessels yielding more than 750kW and for crew responsible for radio communications. Besides that, this convention also addresses the elementary (pre-sea) safety training for all personnel on fishing vessels. In short, the premise of this convention is on competency-based training [2, 22].

The Fisheries Industry in Malaysia

Conventionally, the fisheries industry consists of two major components which are marine-capture fisheries and aquaculture. Marine-capture fishing was categorized into two main types namely coastal or inshore fishing and deep-sea fishing. Fisheries sector had contributed RM11,466.53 million to the nation's economy in the year 2013, increasing by 0.23% compared to 2012. The Food fish sector showing an increase 2.09% in term of value and a decrease of 1.73% in term of quantity compared to 2012. The food fish sector which is a combination of marine capture, inland fisheries and aquaculture (excluding seaweed) produced 1,749,314 tonnes worth RM10,818.60 million. Non-Food fish sector also decreased by 23.11% compared to 2012. Non-Food which is combination of seaweed, ornamental fish and aquatic plants contributed RM647.92 million. The nation GDP (Gross Domestic Product) in 2013 shown fish production from the fisheries sector contributed 1.1% or RM7.91 billion. The Malaysia's aim is to reach a high income level by 2020. In order to fulfill that aim, the Malaysian fishing industry-in particular deep-sea fishing and aquaculture is required to grow further into large-scale commercial industry [1, 3].

Safety Issue and Training Requirement

Safety has always been the main issue in just about any field for many years. Exposure to risks is sometimes too unbearable that leads to many conventions being created by respective organizations [6]. This condition happens in marine field as well. Safety is the most talked about issue involving various ranges of the populace in this industry. One of the most affected groups of the population is fishermen [18]. International Maritime Organization (IMO) estimated that safety crises among seagoing fishing vessel crews have cost more than 24000 lives per year.

To address this problem, the responsible party shall take appropriate action and to ascertain the causes of the accident-prone sea according to data and statistics that have been provided. Lack of information also makes it difficult for authorities to investigate the effects and causes of accidents and the number of accidents that occur in an area.

The training of fishermen is a way to channel the results of teaching and learning better. Historically, the training of fishers has been limited to skippers, mates and engineers in developed countries. The IMO Protocol to the Standards of Training, Certification and Watchkeeping for Seafarers (1978) provided a standard for states to follow. But, it was never confirmed and was replaced by the Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (1995) [22].

POSSIBLE ISSUES FACED BY FISHERMEN REGARDING THE IMPLEMENTATION OF STCW-F

Cost

Many studies have given special important that, the poverty of fishing communities is dependent upon income and unemployment. The cost for STCW-F training will affect the fishing communities if there any fees that apply to them. Fishing communities are known as low living conditions, low levels of education and poor access to services like schools, health care and infrastructure such as road or markets. Malaysian government efforts to initiate in the 1990s to reduce the poverty level in Malaysia, still many population groups and areas in Malaysia require government support [11]. This STCW-F training should be supported by government in order to apply this convention to fishing communities.

Awareness and Attitude

Accident statistics involving personnel on board fishing vessel are high. The types of injuries are variedwhich involving severe injuries, in some cases also injury of a permanent character. The accident mostly happens during work on deck or in the hold. Thus the fisherman must have their own mind setting to prevent accident during working on board. Malaysian fisherman mostly really cares about their safety, but only based on experience, no training or class taken. Safety attitude among fisherman measures how concerned the fisherman about their own safety. One of the most important to indicated safety climate and behavior is employee/fisherman attitudes. Time saving to performing any job makes the employee takes a shortcut to finish their jobs, this lead to one of the major causes of accidents [6].

Government/Fishermen Association Role and Lack of Facilities

Perak fishing industry among the highest catch in 2013 about 389,599,095MT (Metric Tonnage) for combination of fishing vessel classes A, B, C and C2. The Malaysian Fishery Department also recorded a high number of fishing vessels in Perak. The total of a fishing vessel is 5862, 568 for C class, 210 for C2 class and the rest for A and B class [1]. This show Perak fishing industry has potential to expand due to high number in catch and fishing vessel, so government must make a change in term of facilities, exposure about the safety and involvement from younger generation.

METHODOLOGY

A questionnaire was used to conduct this study. Through a multi-stage random sampling, a total of two fishing districts in Perak were selected namely Manjung and Hilir Perak. The time taken to carry out this study was about 15-20 minutes for each respondent. The chosen 30 respondents consisted of the members of the fishermen's association. For each of the questions asked, they were given a five-Likert scale option whereby 1 represents strongly disagree, 2 represents disagree, 3 represents moderate, 4 represents agree and 5 represent strongly agree. To achieve the objectives of the study, descriptive statistics such as frequency, percentage and mean were employed in order to describe the general data of the study. The data gathered was processed and analyzed using Statistical Package for the Social Sciences (SPSS) Version 21 [21].

RESULTS AND DISCUSSION

Respondents' Demographic Data

The results showed that most of the fishermen are Malays, and that prevalence of men in the fishing industry was still high. Respondent's highest age group is 40 years old and above. This shows that fishermen is an 'old-timer' job and not yet accepted by the younger generation. The percentage score recorded for experience showed that the majority of the respondents interviewed can be considered to be experienced fishermen as shown in Table 1.

Table 1: Demographic data

Items		Frequency	Percentage
Age	20 years and less	1	3.3
	21 - 30 years	6	20
	31 - 40 years	6	20
	41 - 50 years	12	40
	51 - 60 years	2	6.7
	more than 60 years	2	6.7
Experience in fishing industry	5 years and less	2	6.7
	6 - 10 years	15	50
	11 - 15 years	2	6.7
	16 - 20 years	6	20
	21 - 25 years	3	10
	26 - 30 years	2	6.7
	more than 30 years	1	3.3
Place of fishing vessel port	Segari	5	16.7
	Teluk Gedung	5	16.7
	Pengkalan Baru	2	6.7
	Teluk Senangin	4	13.3
	Pulau Pangkor	3	10
	Tanjung Batu	1	3.3

	Kota Setia	10	33.3
Fishing area	Tanjung Hantu	9	30
	Pulau Sembilan	4	13.3
	Pulau Pangkor	5	16.7
	Pantai Remis	2	6.7
	Bagan Dato Coastal Area	10	33.3

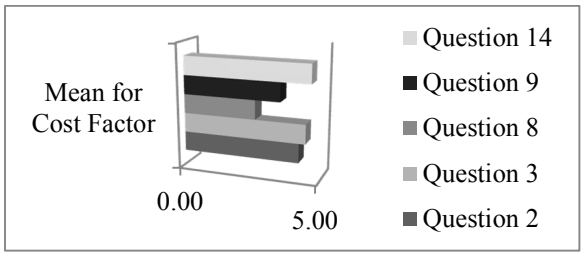

Figure 1: Chart of mean for cost factors

Figure 1 showsmean for cost factor in question 2, 3, 8, 9 and 14. The highest mean is question number 14 "agree to take the STCW-F training if the costs borne by the government." The second highest is question number 3 which is "fees for STCW-F training cause problems for fishermen". The lowest mean is question 8 "fisherman only work for the salary and never thinks of their safety." It is shown that fisherman community really have a problem with the cost of this training if this training comes with fees. Lowest mean shows fisherman really has awareness about their own safety.

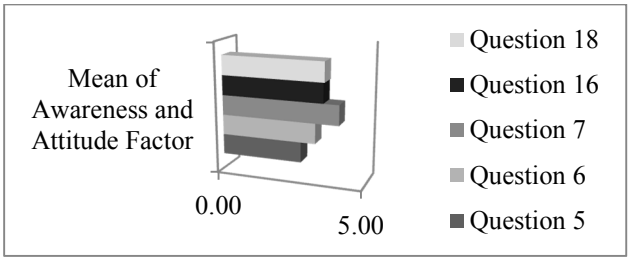

Figure 2: Chart of mean for awareness and attitude factors

Figure 2 showsmean for awareness and attitude factor for question 5, 6, 7, 16 and 18. The highest mean is question number 7 "fisherman never knows the existent of STCW-F." The second highest is question number 18 which is "The conventional method of fishing is one reason why training STCW-F felt unimportant by the fishermen." The lowest mean is question 5 "fisherman has no interest in safety/STCW-F." Based on the interview session, fisherman show how they do take seriously on their safety. As mention before, fisherman does not have a right fundamental knowledge on safety precaution, personnel survival, firefighting and etc. various factors of accidents, human error one of the factor. Many cases of fishing vessel accident because lack of solving fundamental to tackle safety problems and lack of safety improvement strategies [12]. Based on the survey, the high mean 4.10 is fisherman never knows the existent of STCW-F. That show how government has not make any exposure about this safety to the fisherman community.

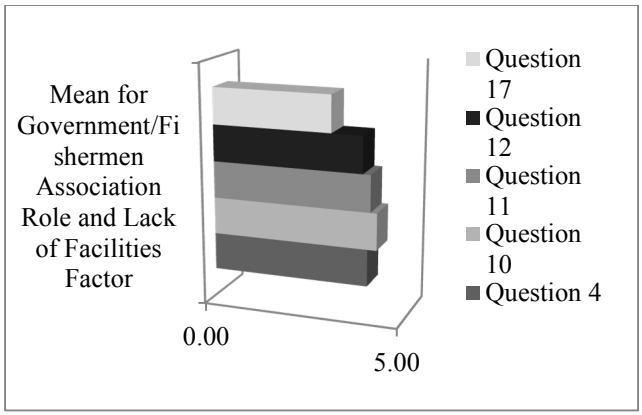

Figure 3: Chart of mean for government/fishermen association role and lack of facilities factors

Figure 3 shown mean for government/fishermen association role and lack of facilities factor for question 4, 10, 11, 12 and 17. The highest mean is question number 10 "the government or authorities body giving less exposure about safety at sea." The second highest is question number 11 which is "the government and authorities body give less promotion about the importance of STCW-F to the fisherman". The lowest mean is question 17 "lack of involvement of young people in the fisheries sector caused the implementation of the STCW-F training cannot be conducted." Based on the survey, fisherman had agreed lack of training centerfor them is one of the factors why fisherman never takes any of training about safety on sea. Moreover, training centerthat available for STCW-F is located far from Perak. For example, Malaysian Fisheries Institute (IPM) located at Chendering, Terengganu. Fisherman had agreed the government had giving less exposure/promotion about safety at sea. Therefore, the government or authorities' body must give more exposure/ promotion about safety at sea, before applying STCW-F on them. That because most of fisherman know nothing about this convention. Except the fisherman who was in merchant shipping industry they did know about STCW, but never know about STCW-F. Safety equipment like life raft, fire extinguisher, safety jacket, safety boots and etc., must be prepared before fisherman start to work. Normally, when there is prevention in context of work activities or physical implementation, it always associated with lifesaving and safety devices for vessels [10].

Issues Regarding the Implementation of the Convention Faced by the Fisherman

The analysis part begins with reliability analysis to check whether the selected items are reliable to the element in the questionnaire. Cronbach's alpha which is based on the average correlation within items was used in this study. The value of Cronbach's alpha of 0.70 or higher is considered as good where value between $0.6 \leq \alpha < 0.7$ is considered as moderate and the items studied in each element are correlated to another [19, 20]. In this analysis, the value of Cronbach's alpha is 0.648 which considered as moderate and suggesting that the items have relatively moderate internal consistency. Therefore, the selected items are reliable to be used throughout this research.

Table 5 shows the results regarding the statements that measure the issues regarding the implementation of the convention faced by the fisherman. Based on the analyses performed, it can be seen that the statement "agree to take the STCW-F training if the costs borne by the government." recorded the highest mean score (M=4.63). The second highest mean score was recorded in the statement "fees for STCW-F training cause problems for fishermen." (M=4. 47). The lowest mean score was recorded for the statement "fisherman only work for the salary and never thinks of their safety." (M=2.67).

Table 5: Survey data

Descriptive Statistics			
	N	Mean	Std. Deviation
Q1. English language will be a problem to fisherman if STCW-F will be teaches in English language.	30	4.3	0.84
Q2. The cost of travel to the place of training, accommodation and food will be a problem if the fishermen have to attend this training.	30	4.23	0.94
Q3. Fees for STCW-F training cause problems for fishermen.	30	4.47	0.51
Q4. Lack of training center for STCW-F is one of problem for fisherman.	30	4.03	0.85
Q5. Fisherman has no interest in safety/STCW-F.	30	2.8	1.35
Q6. Fishermen never take any of safety training at sea before.	30	3.3	1.26
Q7. Fisherman never knows the existent of STCW-F.	30	4.1	0.88
Q8. Fisherman only work for the salary and never thinks of their safety.	30	2.67	1.24

Q9. The time taken for training STCW-F will disturb the fishermen working time.	30	3.57	0.86
Q10. The government or authorities' body giving less exposure about safety at sea.	30	4.27	0.52
Q11. The government and authorities' body give less promotion about the importance of STCW-F to the fisherman.	30	4.1	0.8
Q12. Competition with the foreigners cause local fisherman has no chance to go to open sea.	30	3.9	0.92
Q13. Local fishermen afraid go to open sea due to the risk that they lie ahead.	30	3.43	1.1
Q14. Agree to take the STCW-F training if the costs borne by the government.	30	4.63	0.67
Q15. Training STCW-F will affect the price of the catch.	30	3.37	0.76
Q16. Age cause the fisherman giving less attention to the training of STCW-F.	30	3.57	1.22
Q17. Lack of involvement of young people in the fisheries sector caused the implementation of the STCW-F training cannot be conducted.	30	3.1	1.27
Q18. The conventional method of fishing is one reason why training STCW-F felt unimportant by the fishermen.	30	3.6	1.04

DISCUSSION

In the field of fishing industries, the major concern safety and health improvement based on involvement from numerous institution, national governments and nongovernmental organisations [9]. Thus, government and non-governmental organizations must give a concern about the high mean of the statement as mention previously "agree to take the STCW-F training if the costs borne by the government." recorded the highest mean score (M=4.63). The second highest mean score was recorded in the statement "fees for STCW-F training cause problems for fishermen." (M=4. 47). The lowest mean score was recorded for the statement "fisherman only work for the salary and never thinks of their safety." (M=2.67). STCW-F is a regulation and policy instrument that give influence in fishing industry to make a government new phase of safety precaution from local all the way to international standard [13].

CONCLUSION

Perak fishing industry has a big potential to expand in a short time based on statistic in a past few years [3], to maintain the outcome of this industry by upgrading the safety for fisherman is a must. STCW-F is the way to upgrading fisherman safety precaution in term of whole vessels, start from the skipper until the crew members. STCW-F covered all safety aspects, to apply this convention to fisherman still many factors need to be considered by government. The factors that need to be government is the cost of training, attitude of fisherman, awareness of fisherman, exposure for safety and facilities of training. All these factors are critical part of this research due to fisherman had agreed and statically analysis shown high Mean on the questionnaires.

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