

Resiliency of Fisherfolks on Safety Measures in the Municipality of Balatan, Camarines Sur Philippines

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INTRODUCTION

The promotion of sustainable shipping and sustainable maritime development is one of the major priorities of the International Maritime Organization (IMO) in the coming years.¹ Safety measures for fisherfolk are essential prior to and during fishing to prevent any accident or emergency at sea. Fisherfolk and fishing boat owners should follow government rules and regulations such as BFAR Republic Act No. 8550, also known as “The Philippine Fisheries Code of 1998” under Section 1, which is an act providing for the development, management, and conservation of the fisheries and aquatic resources, integrating all laws pertinent thereto, and other purposes.² One way to improve safety measures for small fisherfolk is to develop regulations to be followed by all fishing boats before and after fishing.

Safety of life at sea (SOLAS) is equally important among fisherfolk. The lives of fishermen are at stake every time a typhoon occurs. Their primary source of living is halted due to inclement weather. Especially when typhoons Rolly and Ulysses hit the Philippines in 2020, leaving at least 20 people dead and its wake displacing 89,000 citizens in Albay and affecting almost two million people across 26 provinces in the island of Luzon, including Camarines Sur. The Bicol Region bore the brunt of the typhoon’s violent winds and torrential rains, blowing away roofs, toppling structures, and causing severe flooding and landslides, which impacted the fishermen of Balatan, Camarines Sur (Balaan, 2021)³.

It is at this point that the researchers decided to study the resiliency level of the fisherfolk in Barangay Duran and Coguit, Balatan, Camarines Sur, the place where the College of Maritime Department of the University of Saint Anthony, Iriga City, Philippines, is having their extension service. With the eagerness of the researchers to help the constituents, especially the fishermen in the said barangays, the group decided to dig into the resiliency level of fishermen on safety measures at sea to determine the kind of service that the department will be extending in the municipality.

Keywords: Resiliency, Safety of Life at Sea, Fishermen, Behavioral Safety, Technological Safety, Environmental safety, Personal Safety, Safety Measures at Sea

1.1 Objectives of the study. The study aims to determine the resiliency level of fishermen on safety measures in Barangay Coguit and Barangay Duran, Balatan Camarines Sur. The researchers looked into the

personal profile of the fisherfolks along with age, sex, civil status, educational attainment, number of years as a fisherfolk, and monthly income; the level of resiliency of fishermen on safety measures along **behavioral safety, environmental safety, personal safety, and technological safety**; the factors affecting the resilience of the fisherfolk; and, the challenges encountered by the fishermen prior to and during fishing time.

METHODOLOGY

Research Design. The study utilized the descriptive survey method, involving a questionnaire checklist made by the researchers. A descriptive survey (Voxco, 2021)⁴ is an approach to descriptive research that blends quantitative and qualitative data to provide you with relevant and accurate information. The descriptive survey method was used in gathering the data, backed up by interviews and observation.

Participants. The participants in this study are the 159 fishermen from Barangay Coguit (55) and Barangay Duran (104). The researchers considered the total population of fisherfolk in the two barangays as participants in the study.

Instrument. The main data gathering tool used in this study is the questionnaire made and prepared by the researchers based on the safety measures at sea as embodied in the Joint CHED-MARINA Memorandum Circular (JCMC)⁵. Other tools used were informal interviews and observation. The statistical treatment of the data used was the percentage technique, weighted mean, and ranking method.

RESULTS AND DISCUSSION

Profile of the fisherfolks. Along the demographic profile of the respondents, based on the data collected, the study reveals that mostly of the fisherfolks are 39 years old and above with a frequency of 131 or 82 percent; 159 or 100 percent are male; 157 or 99 percent are married; 145 or 91 percent are High School Graduates; 142 or 89 percent had been into fishing for 3-5; and 156 or 98 percent has a monthly income of P3,000 – P4,000.

Level of Resiliency of Fisherfolks on safety measures at sea

Based on the survey conducted, , the following are the results on the level of resiliency of the fisherfolks along behavioral safety, environmental safety, personal safety and technological safety as assessed by themselves.

Behavioral safety. On the level of the fishermen’s resilience to maritime safety measures. First in rank is the fisherfolk depend heavily on prayer before embarkation and disembarkation, which they believe fosters good and harmonious relationships onboard with peers, with a weighted mean of 4.75, interpreted as very high resilience. In contrast, awareness of basic first aid in case of injuries and accidents that may occur on board comes in last, with a weighted mean of 3.75, interpreted as high resilience.

Table 1. The Level of Resiliency of Fisherfolks along Behavioral Safety

| Indicators | AWM | VI | RANK |
|--|------|----|------|
| Fellowship such as praying before embarkation and disembarkation creates good and harmonious relationship on board with peers. | 4.75 | VH | 1 |
| Respecting each other religious and cultural beliefs such as blessing of fishing boats and superstitious beliefs. | 4.50 | VH | 2 |
| Use caution when baiting and removing hooks and nets. | 4.0 | H | 3 |

| | | | |
|---|-------------|----------|---|
| Rituals are done before fishing. | 3.82 | H | 4 |
| Awareness of basic first aid on injuries and accidents that can happen onboard. | 3.75 | H | 5 |
| Total Weighted Mean | 4.16 | H | |

Legend: 4.20 – 5.00 – Very High resiliency (VHR)

3.40 – 4.19 – High Resiliency (HR)

2.60 – 3.39 – Medium Resiliency (M)

1.80 – 2.59 – Low Resiliency (LR)

1.00 – 1.79 – Very Low Resiliency (VLR)

Similar to the current study is the study of FB Yakubu, ON Amoo-Onidundu, AM Adeboye, and OP Adejoh (2012)⁶, from which majority of the respondents who are fishermen are over 30 years old, Married, No formal education and Males and the breadwinners the family.

In a casual interview, the fishermen defended the results, saying that prayer was their best defense against hardships and that they should put God above all else. It was further revealed that every time they go fishing, they already include prayer in their routine.

In the study of Tito M. Cabili and Virginia C. Cuevas (2016)⁷, fishing-related beliefs and behaviors are rituals performed before to fishing in sacred locations, and reverence for places may unintentionally result in the conservation of fishery resources. It can be assumed that fishermen in all parts of the world rely on their good fortune and the help of the Almighty together with diligent labour. According to the supernatural beliefs, rituals are performed and prayers are recited if a disruption is unavoidable, either to obtain permission for work to be done or to placate the spirits residing there to allow intrusion.

Environmental Safety. Alongside with the behavioral safety is the **environmental safety**.

Table 2. The Level of Resiliency of Fisherfolks along Environmental Safety

| Indicators | AWM | VI | RANK |
|---|-------------|------------|------|
| Climate and weather condition before embarkation shall be observed. | 4.75 | VHR | 1.5 |
| Any kind of plastic are not disposed onboard at sea. | 4.75 | VHR | 1.5 |
| Availability of lifebuoy and lighthouse. | 4.0 | HR | 4 |
| Proper segregation of waste onboard. | 4.50 | VHR | 3 |
| Awareness of oil spill that can cause pollution and kill marine life. | 3.75 | HR | 5 |
| Total Weighted Mean | 4.35 | VHR | |

Table 2 demonstrates how robust fisherman are in terms of environmental protection. In order of relevance, the top two indicators are mentioned. Prior to embarkation, climate and weather conditions must be assessed. Any kind of plastic that is not disposed of onboard or at sea has a weighted mean of 4.75, which is regarded as having a very high level of resilience. Some fishermen assert that they take additional safety measures before venturing out.

Table 2 makes it very evident that the fishermen who responded to the survey have very high resilience ratings for sufficient waste segregation on the boat and high resilience ratings for lifebuoy availability in the

lighthouse. The fishermen are also quite resilient to the knowledge that oil spills can harm marine life and produce pollution.

Additionally, a casual conversation with the responders, or the fishermen, demonstrated that they very well understand the effects of discarding trash like plastics in the ocean on both humans and the ecosystem.

Peter Ralph Balena Galicia (2020)⁸ supports the fisherfolks’ resilience in terms of environmental security. In their study, it was noted that one of the fisherfolks’ typical safety practices is to constantly monitor the weather. However, Justice Mensah (2021)⁹ noted that Fisherfolks’ attitudes on garbage disposal addressed three primary issues: (1) demand for waste collection services as evidenced by their readiness to pay for waste collection services (2) waste segregation and (3) where solid waste was disposed of.

Personal Safety. On the extent of resilience of fishermen along with personal safety, as shown in Table 2, it reveals how resilient the fishermen are. They use locally made floating materials like styrofoam in the absence of a life vest. It further shows that fishermen are always ready with the needed gadgets for fishing, including solar batteries, lights, radios, flashlights, and other needed gadgets.

Table 3. The Level of Resiliency of Fisherfolks along Personal Safety

| Indicators | AWM | VI | RANK |
|--|-------------|-----------|------|
| Life vest is not available instead they are using locally made floating materials such as Styrofoam for life saving. | 5.0 | VHR | 1 |
| Awareness of basic swimming. | 4.20 | VHR | 5 |
| Knowledge of basic knot tying and handling. | 4.50 | HR | 3 |
| Proper knowledge of boat handling. | 4.25 | VHR | 4 |
| Bringing of safety items such as water, flashlights, cellphone or radio, spare dry cell batteries, solar battery, solar lights with panel, head gear, goggles, long sleeve, life vest, life ring and hand flare. | 4.75 | HR | 2 |
| Total Weighted Mean | 4.54 | HR | |

In an article published on www.shmgroup.com on Understanding Life Jackets: Your Personal Safety Device, it was emphasized that life jackets are used to protect the wearer in open water bodies; these provide safety in rough seas and are useful in maintaining the body in the optimum position to prevent drowning.

Considering the above data, there is a need for sufficient gadgets and life jackets for fishermen. They may be very resilient, but their safety is assured by giving them the vest that they need. This can possibly be addressed by the university as part of the outreach and extension program.

Technological safety. Another important variable on safety measures is technological safety. Evidently, Table 4 shows how resilient the fisherfolks are in terms of the technological safety.

Table 4. The Level of Resiliency of Fisherfolks along Technological Safety

| Indicators | AWM | VI | RANK |
|---|------|-----|------|
| Equipment is cared by regularly inspecting for tears or hole and cleaning of fishing boats before embarkation. | 5.0 | VHR | 1 |
| Have appropriate knowledge and skills in the proper boat handling and marine engine operation (gasoline refilling) and maintenance. | 4.75 | VHR | 2 |
| Proper knowledge in handling engine tools. | 4.66 | VHR | 3 |

| | | | |
|--|-------------|------------|---|
| Knowledge of boats exact location and areas with signal. | 4.54 | VHR | 4 |
| Local authorities keep track of boats location during emergencies. | 3.82 | HR | 5 |
| Total Weighted Mean | 4.55 | VHR | |

The above data shows that the fisherfolks are technologically equipped with knowledge in cleaning, boat handling marine engine operation, maintenance, and other needed skills in handling the boat. It further shows positivity on the part of the fishermen. However, it is in contrast to the study of Peter Ralph Balena Galicia (2020)¹⁰, which reveals that fisherfolks check the condition of all equipment and machinery before use and are deficient in safety equipment and appliances onboard, have no information regarding the operation of safety equipment, lack practice on fire drills, rarely conduct safety awareness program and lack of life-saving device available on boat.

Relative to Galicia’s (2020)¹¹ findings, are the factors affecting the resiliency of the fisherfolks. If there are deficiencies found in their study, the current study also identifies some factors affecting re resiliency of the fisherfolks.

Factors Affecting the resiliency of the Fisherfolks

Based on the interview, here are some of the factors affecting the resiliency of fisherfolks as identified by themselves: Lack of resources such as flashlight, spare dry cell batteries, life-vest, tools, radio or cellphone, lantern, first aid kit, gloves, and headgear; No available garbage bag onboard the boat; no proper orientation on the alertness of surroundings; No training and orientation of Safety of Life at Sea (SOLAS); lack of engine tools and equipment, and; lack of maintenance on facilities and equipment.

Challenges encountered by fisherfolks before and during fishing time

Among the challenges encountered by the fisherfolks prior to fishing includes weather condition such as high tide, lack of resources, and lack of tools for boat maintenance. Although they revealed during the casual interview that they tend to borrow tools from those who have them, but would be better if they had their own tool in their boats.

On the other hand, the following are the identified challenges during fishing: sudden changes in weather conditions at sea, and unpredicted surroundings at sea especially wildlife underwater such as jellyfish, stingrays, and sharks.

The above results will be considered by the University Community Extension Office in cooperation with the College of Maritime Education as bases for the continuation of the Community Extension Service program in the Balatan Camarines Sur. The CES may request assistance and support from the administration and the department for the continuity of the College of Maritime Education. The USANT CES office and the College of Maritime Education shall coordinate with the local government of Balatan Camarines for the success of the program and successful collaboration. A Three (3) Years Community Extension Development Plan may be S/Y 2023-2026 be implemented by the College of Maritime Education based on their annual extension program of activities.

CONCLUSIONS

Most of the fisherfolk are 39 years old and older, married, male, high school graduates, and have a monthly income between P4,000.00 and \$5,000.00.

The researchers came to the conclusion that the fisherfolk in the two barangays in Balatan, Camarines Sur, have a very high level of resiliency in terms of environmental, technological, and personal safety, while

behavioral safety has a high level of resiliency. However, the researchers still considered the lowest rank among the indicators in every variable as the basis for addressing the identified problems based on the results of the study.

In the case of the factors affecting resiliency, although it is evident that the fishermen tend to have a very high level of resiliency from the three (3) indicators, they still identified factors that affect their resiliency, and these are: lack of resources such as flashlights, spare dry cell batteries, life vests, tools, radios or cellphones, lanterns, first aid kits, gloves, and headgear; lack of available garbage bags onboard the boat; lack of proper orientation on the alertness of surroundings; lack of training and orientation of Safety of Life at Sea (SOLAS); lack of engine tools and equipment; and lack of maintenance on facilities and equipment. And these are the factors that need to be addressed by the researchers, which will be their basis for coming up with an action plan for the community extension project in the said barangays.

Furthermore, the fishermen have encountered difficulties both before and during fishing. The identified challenges before fishing can possibly be addressed, as it was just concern for the resources. They actually have the resources, but not enough. However, difficult to address are the challenges encountered during fishing, such as changes in weather conditions at sea. In times like this, the researchers will be able to determine how resilient the fisherfolk are.

RECOMMENDATIONS

Based on the result, the researchers will prepare an action plan for a proposed community extension program in Barangay Coguit and Duran, Balatan, Camarines Sur. The professors and students in the College of Maritime education of the University of Saint Anthony, will serve as the facilitators in giving the training and lecture to the fisherfolks of the said barangays.

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